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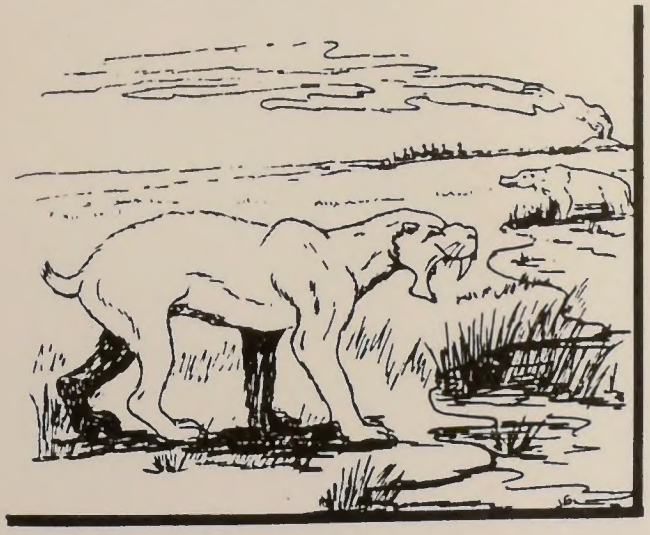
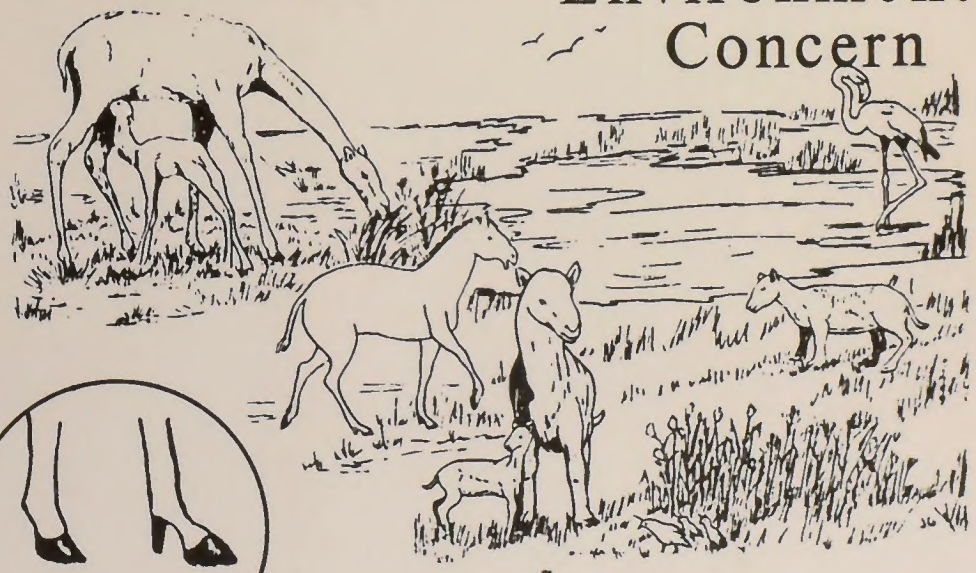
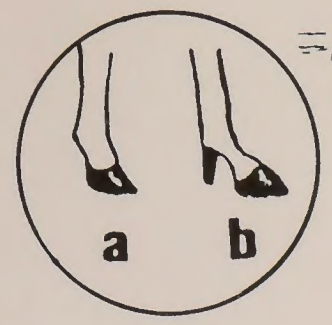
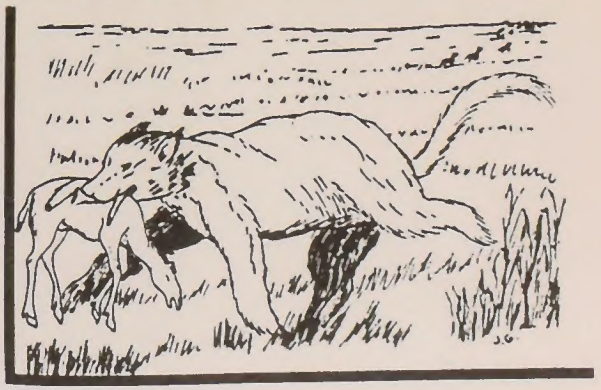
MANAGEMENT PLAN FOR RAINBOW BASIN NATURAL AREA

An Area of Critical Environmental Concern









Barstow Resource Area
California Desert District
Bureau of Land Management
U.S. Department of the Interior

JULY 1990

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Management Plan
for the
RAINBOW BASIN NATURAL AREA

An Area of Critical Environmental Concern

Barstow Resource Area
California Desert District
Bureau of Land Management
U.S. Department of the Interior
July 1990

Management Plan
for the
Rainbow Basin Natural Area

An Area of Critical Environmental Concern

Prepared by:

_____ _____

Lead Outdoor Recreation Planner, Date
Barstow Resource Area

Recommended by:

_____ _____

Chief, Recreation and Wilderness Staff Date
Barstow Resource Area

_____ _____

Chief, Resource Protection Staff Date
Barstow Resource Area

Approved by:

_____ _____

Barstow Resource Area Manager Date

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I. INTRODUCTION

A. Location and Setting

The Rainbow Basin Planning Area (Illustration 1) is located approximately eight miles north of Barstow in central San Bernardino County, California. The area is accessible by Fort Irwin Road, then west on Fossil Bed Road to the Rainbow Basin Road.

The planning area boundary encompasses approximately 31,000 acres, of which about 19,480 acres (62%) are public lands administered by the Bureau of Land Management. The planning area includes the Rainbow Basin Natural Area, an Area of Critical Environmental Concern (ACEC). This ACEC (Illustration 2) was designated in the California Desert Conservation Area Plan of 1980, which gave general guidelines for its management, including the requirement to prepare this management plan.

The area has moderate relief with elevations ranging from about 2,800 feet at Fossil Bed Road to 4,000 feet at the head of Owl Canyon. Owl, Fossil, and Coon Canyons are three major intermittent drainages which bisect the area (Illustration 2).

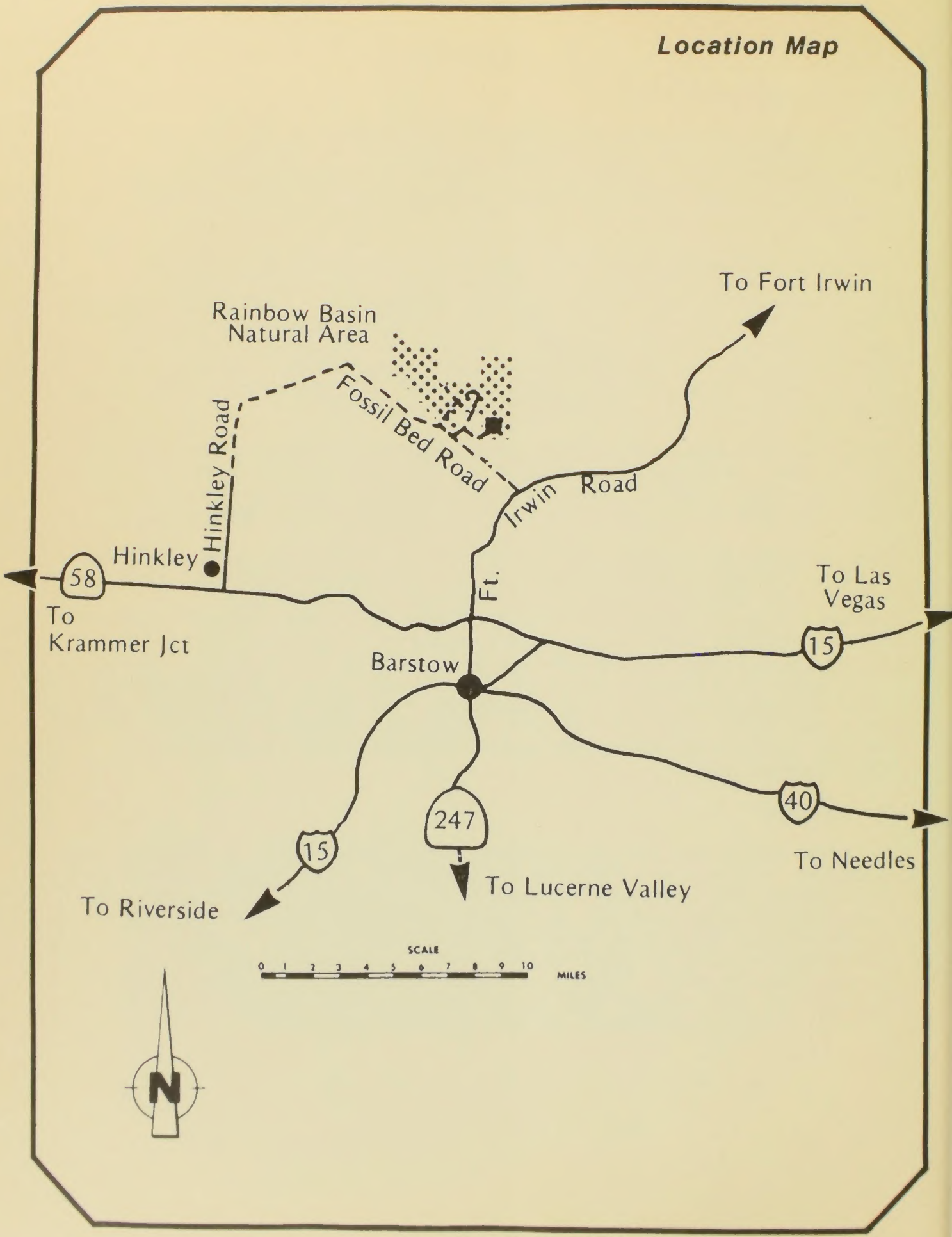
The Barstow formation, which contains a mammalian fauna of late-middle and upper Miocene age, is the principal geologic unit within the planning area. The Barstow formation has paleontological values of national significance. Fossils from the Barstovian Land Mammal Age removed from Rainbow Basin can be found in museums across the country, and fill a paleontological void that is either missing or not as well represented anywhere else on the North American Continent. In 1941, the Rainbow Basin area was designated by the North American Paleontological Society as the type locality or reference standard for the Barstovian Land Mammal Age.

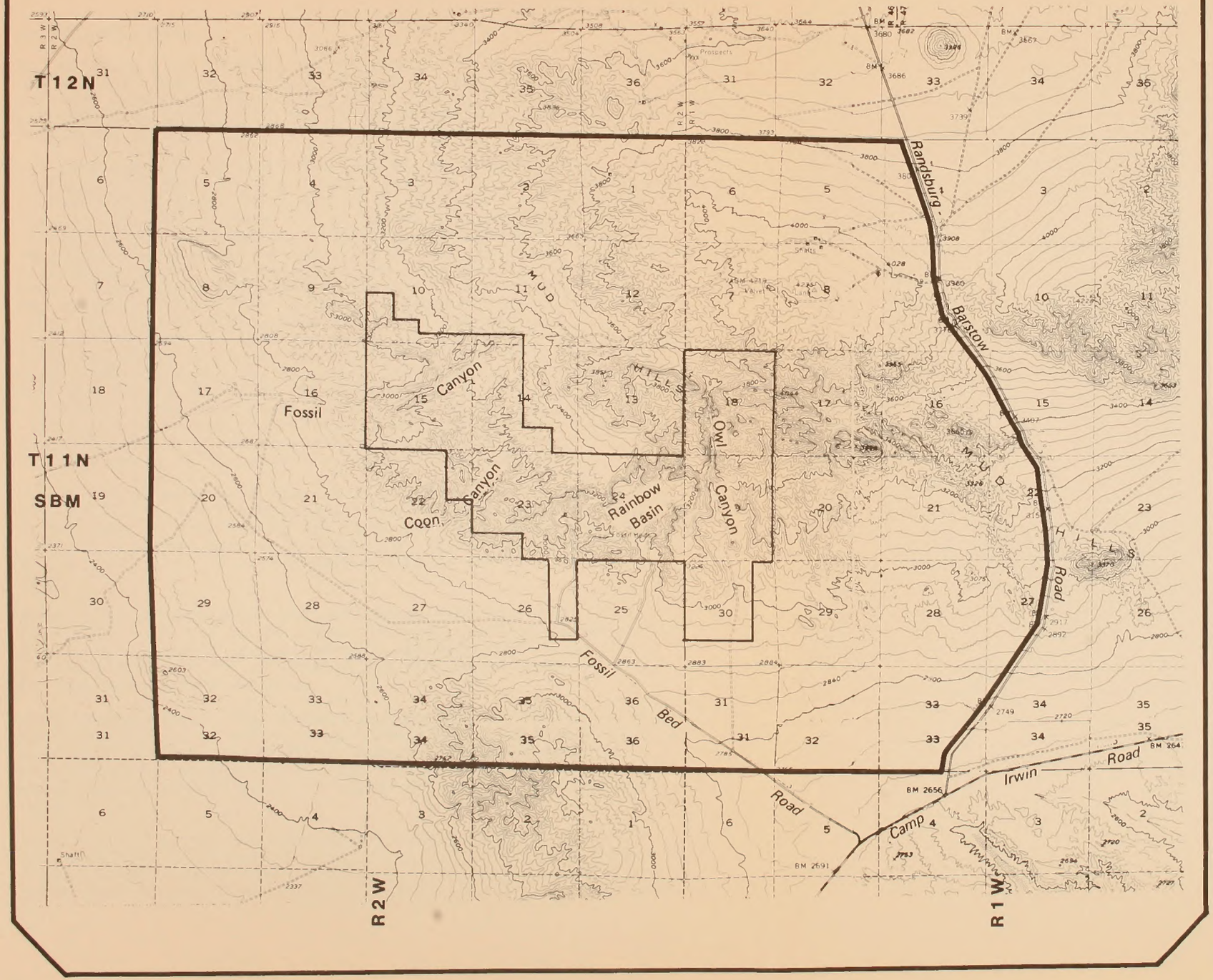
B. Purpose

Rainbow Basin has gained national recognition for its distinctive scenery, natural splendor, and scientific importance. Intensive recreation use, largely concentrated in specific locations, has resulted in some decline in values for which the area has been recognized. This plan develops specific actions to protect important values in this special area. Preservation and protection of outstanding and significant values, while allowing for public use, appreciation, and study, will be the guiding principles for management of the Rainbow Basin Natural Area.

ILLUSTRATION 1

Location Map





RAINBOW BASIN NATURAL AREA

MANAGEMENT PLAN

NORTH 0 ½ 1 2
Scale

ACEC / Planning Area Boundaries

Management Area Boundary (Planning Area) ——

Rainbow Basin Natural Area-ACEC Boundary ——

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Barstow Resource Area

C. Current Status

The planning area includes approximately 31,000 acres of public and private lands in T. 11 N., R. 1 W., and R. 2 W.,SBM. Situated in the Mojave Desert eight miles north of Barstow, the planning area is within a two to three hour drive of all major population centers in Southern California.

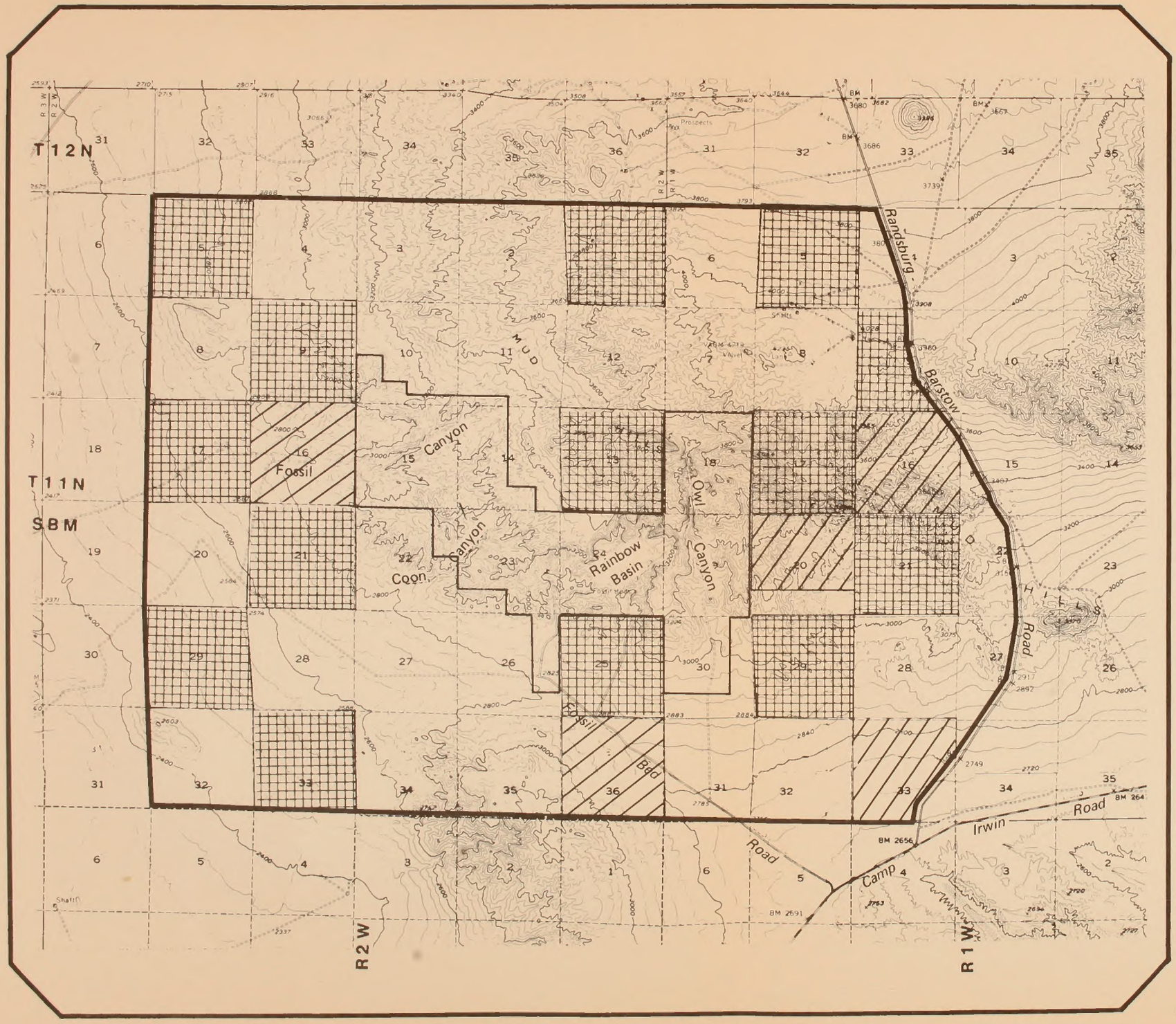
The planning area includes both public and private lands, however, this plan does not affect private lands until such time as they may be acquired through acquisition or land exchange. Public lands administered by the BLM make up approximately 62 percent of the planning area, while approximately 27 percent (8320 acres) are owned by the Santa Fe Pacific Realty Corporation (Illustration 3). Recreation is the major use in the planning area. Other important uses are education and scientific study. The majority of the area has been segregated from appropriation under the general mining laws and mining has not been a significant use. A right-of-way for an underground telephone and telegraph cable transects the southern portion of the planning area. The planning area is within the Superior Valley allotment. Portions of the air space above the planning area are included in a military restricted zone. Velvet Peak in the north of the area contains a developed Federal Aviation Administration radar-communication site and nearby Lane Mountain is used intermittently by the military for the same purpose.

Two county maintained roads provide access to the planning area via the Barstow-Fort Irwin Road. Access to the southern portion of the area is from Fossil Bed Road, while access to the northern portion is across private property via an unmaintained dirt road which turns west off of the Copper City or Randsburg-Barstow Road.

Roads into Rainbow Basin and Owl Canyon from the south are normally accessible by passenger vehicle. Vehicle routes into Coon Canyon, Fossil Canyon, and the northern portion of the planning area are not maintained and are normally only accessible by four-wheel drive vehicle.

Conflicts affecting use in the planning area relate to protection and preservation of natural and scientific values and overuse by recreationists in some specific areas. Proposals for the utilization of mineral values are potentially conflicting with these natural and scientific values, as well as, recreational uses.

Unstable and steep, but fascinating, topography can invite visitors into hazardous situations. Additionally, the danger of flash flooding is always present and occasionally renders the roads into Rainbow Basin and Owl Canyon impassible to vehicles.



RAINBOW BASIN NATURAL AREA

MANAGEMENT PLAN

NORTH

0 ½ 1 2

Scale

LAND STATUS

Public Land

Private (Santa Fe Pacific Realty Corp.)

Other Private

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California Desert District
Barstow Resource Area

II. MAJOR RESOURCE ISSUES

This section focuses on the major resource issues that need to be resolved through this plan. Resources not discussed here are not considered major issues. Minor resource issues will be resolved through the implementation of management actions to resolve the major issues. Appendix A, Environmental Assessment, contains a detailed description of resource values and current uses in the Rainbow Basin area.

A. Degradation of Paleontological and Visual Resources Caused by Human Activity

Both paleontological and visual resources are being impacted by the inappropriate and illegal use of off-highway vehicles (OHVs) in the Rainbow Basin area. Illegal digging of fossils has occurred in the recent past.

B. Destruction of Wildlife Habitat Caused by Human Activity

Habitat of the threatened Western Mojave Desert Tortoise is being impacted by the inappropriate and illegal use of OHVs in the Rainbow Basin area. These vehicles are being operated off of existing roads and trails and are causing extensive damage to wildlife habitat in some areas.

C. Public Safety

Target shooting and hunting are incompatible with areas where visitors are concentrated, such as a recreation area like Rainbow Basin. This poses a significant threat to visitor safety.

III. MANAGEMENT GOALS

A. Protect and preserve significant natural values. These include the Barstovian Land Mammal Age fossil beds, the geological formations, wildlife, scenic qualities, and the vegetation types found in the area.

B. Promote and enhance public recreation, education, and interpretation of the natural values. The BLM will continue developed recreation opportunities and increase interpretation to enhance visitor appreciation of the natural values in the area.

C. Provide visitor services to enhance public enjoyment and safety in the area.

IV. MANAGEMENT ACTIONS

1. Continue educational opportunities with universities, colleges, and the Desert Studies Center. The BLM will continue to conduct an outdoor classroom in the area for elementary school students. (Goal A, B, and C).

Discussion

The Rainbow Basin Natural Area offers excellent opportunities for paleontological and geological education. The area is used throughout the year by many museums, colleges, and universities. In 1988, the BLM initiated an outdoor classroom program for 5th grade students in the Barstow Unified School District. This program operates out of the Owl Canyon Campground in Rainbow Basin and is designed to teach students in the areas of botany, geology, archeology/paleontology, wildlife, desert survival, and off-highway vehicle safety. These educational uses are expected to continue and possibly expand in future years.

2. Continue operation of the Owl Canyon Campground and develop an equestrian/group camping area southeast of the existing campground. The Rainbow Basin Natural Area ACEC is closed to camping, except for designated campgrounds. Continue use of a volunteer campground host to assist visitors and maintain the area. (Goals A, B, and C).

Discussion

The Owl Canyon Campground contains 31 campsites and is operated as a fee campground. It contains restrooms (vault toilets), potable water, picnic tables, shade ramadas, grills, and firerings. The primary use season is from fall through spring. While some summer use does occur, daytime summer temperatures usually exceed 100 degrees F. which discourages many visitors.

An undeveloped equestrian/group camping area exists southeast of the campground. It has historically been used by student, scout, and equestrian groups. This type of use is expected to continue in the group camping area. Development for the group area will consist of signs, trash receptacles, a horse watering trough, corrals, a potable water tank, a restroom, and firerings. Use of the group camping area will be by reservation to avoid conflicts between users, however, depending on group size and type of use, more than one group may be in the area at any one time. During the 2-4 weekends per year the area is used by large equestrian groups, they will have sole use of the group campground if they are the first group to make a reservation for that particular weekend. Camping will be prohibited

outside of designated campgrounds within the ACEC to protect the natural resource values for which the ACEC was established.

A volunteer campground host program has existed in the Owl Canyon Campground since the early 1980's and will continue.

3. Designate Owl, Coon, and Fossil Canyons as hiking trails and continue their closure to motorized vehicle use. These trails will also be open to use by equestrians and mountain bikers. (Goal B).

Discussion

Owl, Coon, and Fossil Canyons have historically been used as hiking trails. This use will continue and these canyons will remain designated as closed to motorized vehicle use. These trails will also be open to use by equestrians and mountain bikes. The deep sand found in all three canyons make mountain biking difficult and both equestrians and mountain bikers will be impeded by large rock strata across Owl Canyon. Signs will be placed at trailheads and at points along each trail indicating mileages and interesting natural features. Parking will be provided at the end of the canyons near the trailheads. Barriers will be constructed that allow passage of hikers, but preclude the passage of motorized vehicles.

4. Continue operation of the Rainbow Basin Scenic Drive as a one-way road and establish two interpretive hiking trails along its route. Designate this route as a Back Country Byway. (Goal B.)

Discussion

The four-mile Rainbow Basin Scenic Drive north from its intersection with the Owl Canyon Campground Road through Rainbow Basin to its intersection with Fossil Bed Road is too narrow and winding to allow safe passage of vehicles in more than one direction, therefore it will remain a one-way road. Opportunities exist at two places along the Rainbow Basin Road to provide parking and interpretive trails. One trail would be primarily geologically-oriented and the other paleontologically-oriented. These trails would be self-guided and signed appropriately.

5. Designate all routes of travel within the Rainbow Basin planning area as open or closed to vehicle travel. All routes and washes not designated as open and signed as open routes are closed. No staging for the use of off-highway vehicles will be allowed in the Rainbow Basin planning area. (See Appendix B.) (Goals A and B.)

Discussion

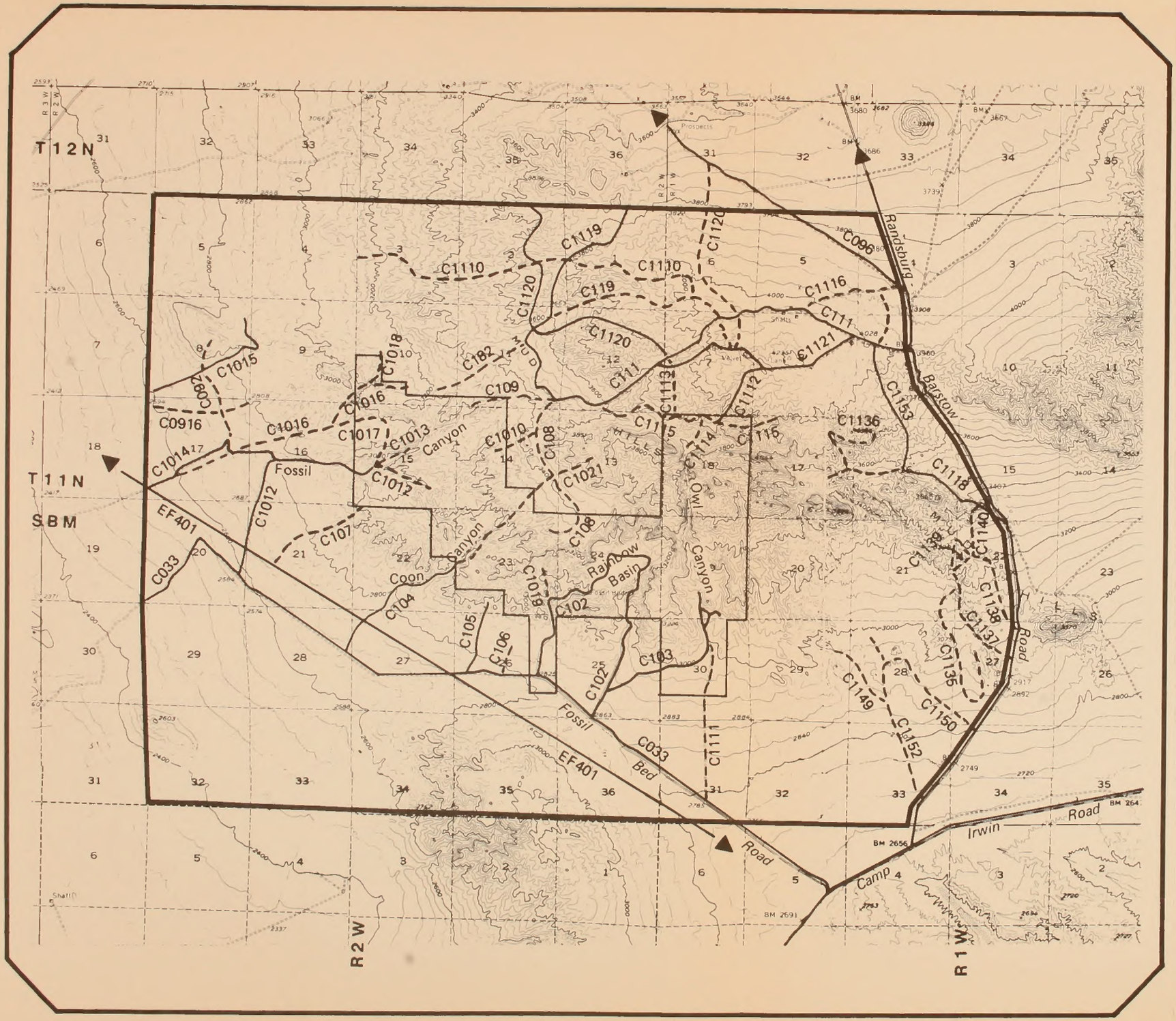
Vehicle routes of travel within the planning area are designated in this plan (Illustration 4). An access network is established to provide the public (both recreation and commercial users) with a means to legitimately use the area. Routes that are designated open will be signed as open routes. Portions of the area have suffered from route proliferation and are used for off-highway vehicle (OHV) play. This use is inappropriate and destructive to the natural resource values of this area. Areas used for OHV play and routes which are closed will be rehabilitated and returned to a natural state. Vehicle Route Designation Records of Decision are found in Appendix C. No staging will be allowed in the Rainbow Basin area. Staging is defined as "the off-loading of a secondary vehicle, which has been transported by a primary vehicle with the intent to ride."

6. Expand existing regulations to close the Rainbow Basin Planning Area to all shooting, including hunting. (Goal C).

Discussion

Most recreation uses in the Rainbow Basin area are low impact activities. These recreation activities are incompatible with the discharge of firearms and it would only be a matter of time before an injury would occur. Little hunting or target shooting currently occurs in the area, therefore displacement of this type of use will have little affect on the surrounding area.

A notice in the Federal Register (Volume 51, Number 20, Thursday, January 30, 1986) closed seven sections to shooting. These were T.11N.,R.1W.,(SBM) Sections 18, 19, 20, 30, T.11N., R.2W., (SBM) Sections 23, 24, 26. These restrictions do not prohibit legitimate hunting activities, only target shooting, trap shooting, and plinking. The remainder of the planning area is presently open to all types of shooting and hunting.



RAINBOW BASIN NATURAL AREA

MANAGEMENT PLAN

NORTH 0 ½ 1 2
Scale

ROUTE DESIGNATION

Open Route ——

Closed Route - - -

Route Number C1016

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California Desert District
Barstow Resource Area

7. Consolidate land ownership patterns adjacent to the ACEC by acquiring private lands with important resource values relative to management of the ACEC. (Goals A and B).

Discussion

The following illustration shows the priorities for private land acquisition.

ILLUSTRATION 5 LAND ACQUISITION PRIORITIES

Priority	Legal Description	Ownership
1	San Bernardino Meridian T.11N.,R.1W. section 5, all,; section 9, all,; section 17, all; section 21, all; section 29, all. section 16, all; section 20, N1/2, N1/2S1/2; T.11N., R.2W. section 1, all; section 5, all; section 9, all; section 13, all; section 17, all; section 21, all; section 25, all. section 16, all;	 Santa Fe Pacific Realty Corp. (SFPRC) other private other private SFPRC SFPRC SFPRC SFPRC SFPRC SFPRC SFPRC other private
2	T.11N.,R.1W. section 30, NE1/4NE1/4; section 33, all. T.11N.,R.2W. section 29, all; section 33, all; section 36, all.	 other private other private SFPRC SFPRC other private

These parcels are needed to correct a fragmented land ownership pattern and will be acquired through the Las Flores land exchange and purchase using Land and Water Conservation Fund monies. This acquisition will provide for public access into the ACEC and to all trailheads, as well as, provide for the protection of the area's resources. Acquisition will be on a voluntary basis only.

8. Develop informational, interpretive, and directional signing for the area. Develop a Rainbow Basin brochure, detailing the recreational and educational opportunities of the area. (Goals A, B, and C).

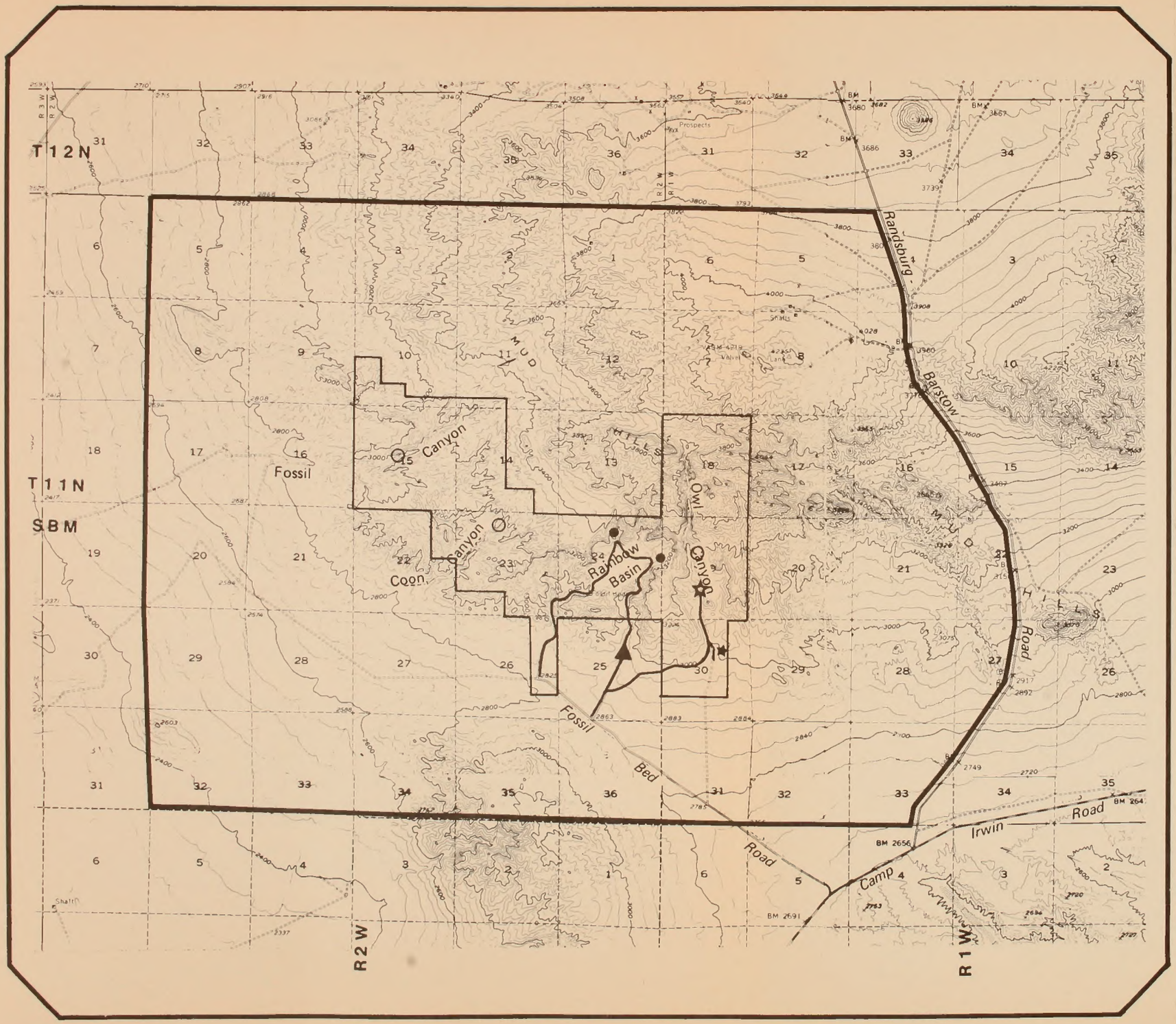
Discussion

Signing associated with the ACEC will be of three broad classes and are detailed in Appendix C - Sign Plan:

1) Directional signs are used to show area visitors how to access facilities and natural features;

2) Informational signs are used to give visitors appropriate messages that help them safely and legally enjoy the area; and

3) Interpretive signs are used to explain the natural history and scientific relationships of the Rainbow Basin area.



RAINBOW BASIN NATURAL AREA

MANAGEMENT PLAN

NORTH 0 ½ 1 2

Scale

FACILITIES

- Owl Canyon Campground ☆
- Owl Canyon Group Camping Area ★
- Interpretive Trail ●
- Rainbow Basin Loop Road ▲
- Hiking Trail ○

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California Desert District
Barstow Resource Area

V. MONITORING

Monitoring the implementation of the Rainbow Basin Natural Area Management Plan is essential to ensure that the plan's goals are achieved. Monitoring measures:

1. The extent to which management actions have been implemented;

2. The extent to which implemented actions are achieving management goals;

3. The extent to which further plan adjustments are needed.

The following recreation or education activities, facilities, and implementation strategies will be monitored by BLM personnel to determine if management goals are being achieved or what changes need to be put in place to achieve the desired outcome.

1. Outdoor Classroom- Is the program meeting the expectations of both the BLM and the Barstow Unified School District? This program should be evaluated each year by both BLM and school district employees who have participated the previous year to determine any changes which will improve it for the students involved.

2. Campgrounds- The Owl Canyon Campground and associated group campground will be monitored to determine maintenance needs and to ensure that use is being adequately managed to protect resources and supply visitor needs.

3. Hiking and Interpretive Trails- The trail system will be monitored to ensure that signs are in place and maintenance is performed to keep the system in safe condition.

4. Route Designation- Routes designated as open will be signed open. Closed routes will be rehabilitated to remove signs of previous vehicle use. Closed signs, barricades, berms, etc. may be used on some routes until rehabilitation takes place. Following implementation the area will be monitored to determine that designations are solving vehicle access and route proliferation problems.

5. Shooting/Hunting- The shooting/hunting closure will be monitored to ensure that it is effective at resolving firearm problems.

6. Signs- The three classes of signs (directional, informational, and interpretive) will be monitored to ensure that messages are understandable to visitors and messages are accurate and current.

An annual monitoring report will be due on August 1 of each year. This report will discuss progress toward implementing this plan, detail findings, and make recommendations regarding any necessary changes needed to meet planned goals. Preparation of this monitoring report shall be the responsibility of the Lead Outdoor Recreation Planner for the Barstow Resource Area.

VI. IMPLEMENTATION

A. Responsibility

A specific Barstow Resource Area employee will be assigned responsibility for coordinating the implementation of this plan. Monitoring and the annual monitoring report, identifying specific actions to be accomplished by others, and determining adjustments in methodology will be assigned to permanent staff. These assignments will be made annually, supported by the annual work plan, submitted to the appropriate supervisor, and become line items in the responsible individual's Performance Improvement and Position Review (PIPR).

B. Schedule and Cost

ILLUSTRATION 7 IMPLEMENTATION SCHEDULE AND COST

TASK	WM	PROC	PHASE
1. Continue Outdoor Classroom	1	$ 500	1
2. Develop Group Camping Area	2	$22,000	1
3. Establish Canyon Hiking Trails	1	$ 3,000	1
4. Design and Establish Interpretive Trails	3	$ 4,000	2
5. Design and Print Brochure	2	$ 8,000	2
6. Sign Access Route Network	1	$ 2,000	1
7. Rehabilitate Closed Routes	4	$14,000	2
8. Establish Shooting/Hunting Closure	1	$ 4,000	1
9. Complete Directional and Informational Signing	2	$ 2,500	1
10. Land Acquisition through exchange	3	$ 6,600	2

WM=workmonths PROC=procurement
Phase 1 costs equal 9 workmonths and $ 31,000.
Phase 2 costs equal 12 workmonths and $ 32,600.

APPENDIX A: ENVIRONMENTAL ASSESSMENT

ENVIRONMENTAL ASSESSMENT
FOR THE
RAINBOW BASIN NATURAL AREA
MANAGEMENT PLAN

CA-068-0-171

JULY 1990

San Bernardino County
California

United States Department of the Interior
Bureau of Land Management
California Desert District
Barstow Resource Area

I. Introduction, Purpose, and Need

The Rainbow Basin area is of international importance because of the fossil remains of the Barstovian Land Mammal Age. The area has great value for educational and recreational uses. The threatened desert tortoise is found throughout this portion of the Western Mojave Desert.

Rainbow Basin was designated as an Area of Critical Environmental Concern (ACEC) in the California Desert Conservation Area (CDCA) Plan of 1980. The CDCA Plan gave general management requirements for the area and directed that a management plan be written for all ACECs. This plan and environmental assessment are the result of that direction and are in conformance with all land use planning decisions.

II. Description of the Proposed Action and Alternatives

Proposed Action

The proposed action is to adopt the Management Plan for the Rainbow Basin Natural Area. Adoption of the plan would implement the management actions described therein. The following specific management actions are prescribed in the management plan.

1. Continue educational opportunities with universities, colleges, and the Desert Studies Center. The BLM would continue to conduct an outdoor classroom in the area for elementary school students.

2. Continue operation of the Owl Canyon Campground and develop an equestrian/group camping area southeast of the existing campground. The Rainbow Basin Natural Area ACEC continues to be closed to camping, except for designated campgrounds. Continue use of a volunteer campground host to assist visitors and maintain the area.

3. Designate Owl, Coon, and Fossil Canyons as hiking trails and closed to vehicle use.

4. Continue operation of the Rainbow Basin Road as a one-way road and establish two interpretive hiking trails along its route. Designate this route as a Back Country By-way.

5. Designate all routes of travel within the Rainbow Basin planning area as open or closed to vehicle travel. All routes and washes not designated as open and signed as open routes are closed.

6. Expand existing regulations to close the Rainbow Basin Planning Area to all shooting, including hunting.

7. Consolidate land ownership patterns adjacent to the ACEC by acquiring private lands with important resource values relative to management of the ACEC.

8. Develop informational, interpretive, and directional signing for the area. Develop a Rainbow Basin brochure, detailing the recreational and educational opportunities of the area.

Through implementation of these management actions, the plan reduces or eliminates conflicting uses in the management area and protects the outstanding scenic quality, unique geologic and paleontologic features, prehistoric features, and threatened desert tortoise.

No Action Alternative

Under the no action alternative, the area would continue to be managed under the CDCA Plan land use classifications and guidelines. Under current CDCA Plan management, the area is managed to allow a variety of multiple uses, while protecting the resource values found there. The land use classifications for the Rainbow Basin area are limited (L) and moderate (M). The no action alternative would include implementation of the following actions, which are on-going programs, existing regulations, or mandated through previously adopted policy and guidance.

1. The educational use of the area would continue, including the outdoor classroom conducted by BLM with the Barstow Unified School District.

2. The existing campground would remain open to use and the volunteer campground host program would remain in effect, but the existing equestrian/group camping area would not be developed.

3. The Rainbow Basin loop road would remain open and would be designated as a Back Country By-way.

4. Route designation would be completed for the area as directed in the CDCA Plan, but at a slower pace than if accomplished through the Rainbow Basin Management Plan.

5. The existing shooting restrictions for the ACEC would remain in effect, but would not be expanded to cover the entire planning area and hunting in the ACEC and planning area would be unrestricted.

6. Private lands in the area would continue to be acquired through land exchange or purchase.

7. Appropriate visitor signing would be installed in the area.

Alternatives Considered But Dropped From Further Analysis

Preservation Alternative

Under the preservation alternative, the Rainbow Basin area would be closed to public use. Access to the area would be by permit only to conduct scientific research. This alternative was rejected because it denies public access to an area rich in recreation and education opportunities. It also would deny other compatible multiple use activities which can continue to exist, while allowing for full protection of the resources in the area.

III. Description of the Existing Environment

Physiography and Topography

The Rainbow Basin is in the Mojave Desert portion of the Basin and Range province, San Bernardino County, California and is accessible by driving six miles north of Barstow on the Fort Irwin Road, then three miles northwest on Fossil Bed Road to the signed turnoff. Elevations range from about 2,800 feet above sea level at Fossil Bed Road to about 4,000 feet above sea level at the head of Owl Canyon.

Land Use

The CDCA Plan shows public land in the plan area as a combination of multiple-use classes L (limited) and M (moderate).

The plan area is a "checkerboard" of public and private parcels; a result of the 1915 railroad grant patents to Southern Pacific Railroad as authorized by the Act of July 27, 1866. The Santa Fe Pacific Realty Corporation (SFPRC) is still the dominant non-Federal land owner in the plan area (see Illustration 3-Land Status, page 5). Other non-Federal lands in and adjacent to the plan area tend to be heavily subdivided but not currently occupied.

General access to the area is provided by the following San Bernardino County maintained roads:

361400	Irwin Road
254400	Copper City Road
362550	Fossil Bed Road and Rainbow Basin "Loop"

Portions of the public lands within the plan area are affected by BLM Orders of Classification R-1396 (April 16,1970) and R-258 (March 14, 1960), and Order of Designation S-5338-O (September 29, 1972). R-1396 lists unappropriated public lands segregated from appropriation under the agricultural land laws and R.S. 2455 (and similar) sale. R-258 lists lands as unsuitable for

agriculture. S-5338-O lists "Calico Recreation Lands", and carries no segregation.

Approximately 2000 acres (Table 1) of public lands within Sections 18, 19 and 30, T.11N., R.1W., SBM and Sections 23, 24 and 26, T.11N., R.2W., SBM are withdrawn under Public Land Order 5224 (July 5, 1972). These public lands are closed, subject to valid existing rights, to surface entry and location under the mining law. The lands are open to mineral leasing.

TABLE 1

PLO 5224 Protective Withdrawal (July 5, 1972)

San Bernardino Meridian, California	acres
T.11N., R.1W.,	
Section 18: SW1/4 (unsurveyed), SE1/4;	277.00
Section 19: NW1/4 (unsurveyed), lots 1 and 2 of SW1/4, E1/2;	550.92
Section 30: W1/2NE1/4, lots 1 and 2 of NW1/4, N1/2 lots 1 and 2 of SW1/4, NW1/4SE1/4;	291.32
T.11N., R.2W.,	
Section 23: SE1/4NE1/4, E1/2SE1/4;	120.00
Section 24: All;	640.00
Section 26: E1/2NE1/4, NE1/4SE1/4;	120.00
	1,999.24

An additional 1,997.92 acres (Table 2) are proposed for withdrawal for the protection of natural features and recreational values. The notice of proposed withdrawal CACA 17849 (May 26, 1988) segregated, for a two year period and subject to valid existing rights, the public lands. This withdrawal is for a twenty year period. These public lands are not open to surface entry or mining claim location, but open to mineral leasing.

TABLE 2

CACA-17849 Protective Withdrawal

San Bernardino Meridian, California	acres
T.11N., R.1W.,	
Section 18: NE1/4, lots 1 and 2 of NW1/4;	277.92
T.11N., R.2W.,	
Section 10: W1/2SW1/4, SE1/4SW1/4, S1/2S1/2SE1/4;	160.00
Section 11: S1/2S1/2SW1/4;	40.00
Section 14: W1/2,SW1/4SE1/4;	360.00
Section 15: All;	640.00
Section 22: E1/2NE1/4;	80.00
Section 23: NE1/4NE1/4, W1/2NE1/4, NW1/4, N1/2SW1/4, W1/2SE1/4;	440.00
	1,997.92

Public lands in the northeast and north-central portions of the plan area are in withdrawal application CACA 23486 filed by the Department of the Army. This is a portion of the proposed Fort Irwin - National Training Center expansion. The October 13, 1989 notice of proposed withdrawal segregated, for a two year period and subject to valid existing rights, the public lands from settlement, sale, location or entry under the general land laws, including the mining laws. The lands continue open to discretionary mineral leasing.

In 1986, a "Category 3" amendment to the California Desert Conservation Area Plan activated contingency Energy Production and Utility Corridor Q. This amendment was approved by the Record of Decision for the City of Los Angeles Department of Water and Power (LADWP) Meade -Adelanto 500kV DC transmission line CACA 16390.

Existing surface rights of record, and proposed projects, within and adjacent to the plan area are listed below.

CARI 01840 ATT underground coaxial telephone cable R/W granted May 12, 1966 under the Act of March 4, 1911

CARI 786 BLM recreation site and road right-of-way appropriation of July 28, 1967 under 44 LD 513

CARI 1829 Road easement deed (November 2, 1967) to the United States from Southern Pacific Land Company (now SFPRC)

CARI	4526	BLM recreation site appropriation of November 22, 1971 under 44 LD 513
CARI	4879	SCE Coolwater transmission line R/W granted August 29, 1974 under the Act of March 4, 1911
CACA	5268	Corps of Engineers mobile radar site right-of-way reservation granted July 23, 1980 under Section 507 of the Act of October 21, 1976
CACA	5799	FAA radar communications site and road right-of-way reservation granted February 4, 1980 under Section 507, FLPMA
CACA	6203	SCE electric distribution line right-of-way granted March 25, 1980 under Title V of the Act of October 21, 1976
CACA	16390	LADWP Meade - Adelanto 500kV DC electric transmission line granted June 24, 1988 under Title V, FLPMA
CACA	21581	Wyoming - California Pipeline Co., Ltd. (Wycal) right-of-way application, filed February 22, 1988 under Section 28 of the Act of February 25, 1920, for an underground 30 inch diameter natural gas pipeline within EP&U Corridor Q through the southern portion of the plan area.

The Federal Energy Regulatory Commission (FERC) initially licensed the Wycal project on April 4, 1989. A modified project was licensed on January 24, 1990. FERC is the lead Federal agency responsible for EIS preparation for this project, with the California State Lands Commission as a cooperating agency. The BLM's involvement in the project approval is limited to issuance of right-of-way authorization(s).

The Wycal project is in competition with another gas pipeline proposal from the Mojave - Kern River Group, who propose pipelines from the east converging at Daggett, and then continuing west along the All American Pipeline route, except for a "loop" south of Barstow. The proposed Mojave - Kern River pipeline project does not affect the Rainbow Basin plan area. It is possible that only one of the above systems will be constructed, based on economics and market conditions. There is not now the market demand to justify two pipeline systems for natural gas transport through the

area. It is unknown at this time which proposal will be built.

On January 31, 1990 a list of SFPRC lands was forwarded to the ARC-Las Flores Limited Partnership. They will contact SFPRC about the possible purchase of the property to add as offered land exchange base in the ongoing Summit Valley exchange project.

Wildlife

The Rainbow Basin area is predominantly a Creosote Bush Scrub plant community with Joshua trees representing an important structural component. The presence of Joshua trees makes this habitat suitable for a broad range of raptors (hawks and owls) not commonly found in areas without this structural diversity. Rainbow Basin contains a population of the threatened desert tortoise and also lies on the edge of Mojave ground squirrel habitat. The Mojave ground squirrel is listed by the State of California as a threatened species and is considered by the U.S. Fish and Wildlife Service to be a Category 2 Candidate for federal listing as an endangered species. The CDCA Plan identified the need to develop a habitat management plan (HMP) addressing the needs of the Mojave ground squirrel and Joshua tree habitats.

Rainbow Basin lies within a region of the Mojave Desert which is designated by the BLM as Category 1 desert tortoise habitat, as defined in Desert Tortoise Habitat Management on the Public Lands: A Rangewide Plan (1988). The management goal in Category 1 habitat is to maintain stable, viable populations, protect existing tortoise habitat values, and increase tortoise populations where possible. Category 1 represents the highest quality and most manageable desert tortoise habitats identified by the BLM. The majority of lands within the Rainbow Basin area were documented by the CDCA Plan desert tortoise inventory (1979) as supporting from 100 to 250 tortoises per square mile. This is an indication of the high value of these lands to the continued existence of the desert tortoise.

A list of other animals documented as occurring in the Calico Planning Unit (which includes Rainbow Basin) is found below. This list was generated as a result of inventories conducted for preparation of the CDCA Plan. The list is not all inclusive because apparently no small mammal trapping studies were conducted, hence the absence of Mojave ground squirrels, other squirrels, mice, and rats.

Animals Documented as Occurring in the Calico Planning Unit

CLASS	GENUS	SPECIES	COMMON NAME
AMPHIBIA	BUFO	BOREAS	WESTERN TOAD
	HYLA	REGILLA	TREE FROG
	RANA	CATESBIENA	BULL FROG
AVES	AMPHISPIZA	BELLI	SAGE SPARROW
	AMPHISPIZA	BILINEATA	BLACK THROATED SPARROW
	AQUILA	CHRYSAETOS	GOLDEN EAGLE
	ATHENE	CUNICULARIA	BURROWING OWL
	BUBO	VIRGINIANUS	GREAT HORNED OWL
	CALIDRIS	PUSILLUS	SEMIPALMATED SANDPIPER
	CHAETURA	VAUXI	VAUX'S SWIFT
	CHARADRIUS	VOCIFERUS	KILLDEER
	CIRCUS	CYANEUS	MARSH HAWK
	CORVUS	CORAX	COMMON RAVEN
	EREMOPHILA	ALPESTRIS	HORNED LARK
	HIRUNDO	RUSTICA	BARN SWALLOW
	LANIUS	LUDOVICIANUS	LOGGERHEAD SHRIKE
	LARUS	DELAWARENSIS	RING-BILLED GULL
	MIMUS	POLYGLOTTOS	MOCKINGBIRD
	MYIARCHUS	CINERASCENS	ASH THROATED FLYCATCHER
	PHEUCTICUS	MELANOCEPHALUS	BLACK HEADED GROSBEAK
	REGULUS	CALENDULA	RUBY-CROWNED KINGLET
	SPIZELLA	BREWERI	BREWER'S SPARROW
	TOXOSTOMA	LECONTII	LE CONTE'S THRASHER
	ZENAIDA	MACROURA	MOURNING DOVE
	ZONOTRICHIA	LEUCOPHRYS	WHITE CROWNED SPARROW
MAMMALIA	FELIS	RUFUS	DESERT BOBCAT
	VULPES	MACROTIS	KIT FOX
REPTILIA	CALLISAURUS	DRACINOIDES	ZEBRA TAILED LIZARD
	CNEMIDOPHORUS	TIGRIS	WESTERN WHIPTAIL
	CROTALUS	CERASTES	SIDEWINDER RATTLESNAKE
	CROTALUS	SCUTULATUS	MOJAVE GREEN RATTLESNAKE
	DIPSOSAURUS	DORSALIS	DESERT IGUANA
	GAMBELIA	WISLIZENII	LEOPARD LIZARD
	GOPHERUS	AGASSIZI	DESERT TORTOISE
	MASTICOPHUS	FLAGELLUM	RED RACER
	SCELOPORUS	MAGISTER	DESERT SPINY LIZARD
	SCELOPORUS	OCCIDENTALIS	WESTERN FENCE LIZARD
	UTA	STANSBURIANA	SIDE-BLOTCHED LIZARD

Geology

The planning area lies within the western portion of the Mojave Desert geomorphic province. Bounded on the north by the Garlock fault and on the southwest by the San Andreas fault, this province is characterized by isolated knobs and low mountains, separated by broad alluvial plains (Dibblee, 1968).

A "Mineral Potential Report for the Rainbow Basin-Mud Hills Withdrawal Petition" (describing the southern portion of the planning area) was prepared by Ford (1990). Geologically, the planning area is divided (roughly) into two major rock types: Cretaceous quartz monzonite in the northern half and Tertiary sedimentary rocks in the southern half.

Within Rainbow Basin (the central portion of the planning area), the region displays a rugged badland topography, characterized by many small canyons and divides. This topography is typical in areas with little or no vegetative cover, where the underlying material is generally unconsolidated and easily eroded. The terrain varies in elevation from 2,900 feet in Fossil Canyon to more than 3,900 feet in upper Owl Canyon, for an overall relief of approximately 1,000 feet.

Lying beneath these sedimentary rocks is an extensive batholith in Cretaceous quartz monzonite. In the arid desert environment this rock unit disintegrates mechanically to form residual granitic sand. Exposures of this rock weather to form a subdued topography, and form the surface upon which younger, Tertiary rocks were deposited (Dibblee, 1968).

During the Cenozoic, this surface was compressed to form a broad, downwarped basin, into which Late Cenozoic sedimentary and volcanic rocks were deposited. This depositional basin, termed the Barstow basin, was an elongate trough at least 50 miles long by 10 miles wide. Formed during the middle Miocene it was filled with conglomerates, sandstones, lacustrine clays, and volcanic rocks to a depth of more than 6,000 feet (Burke, et al, 1982). The basin then underwent a second period of compression and uplift, followed by an episode of extension, in which the sedimentary rocks were broken by a series of northwest-trending, high-angle normal faults. These faults have been active as recently as the Pleistocene (Dibblee, 1968). The most obvious feature of this compressional episode is the Barstow syncline, a superbly exposed trough-like depression that is visible from the Rainbow Basin parking area.

The oldest sedimentary rocks exposed within the study area are Tertiary in age. These rocks are divided into three separate geologic formations based on lithology and stratigraphic position. In ascending order, they include the Jackhammer,

Pickhandle, and Barstow Formations. These rocks were deposited to fill the Barstow basin between 23 and 13 million years ago, during early to middle Miocene time (Burke, et al, 1982). Each unit is separated by a minor unconformity.

The Jackhammer Formation was deposited during the early Miocene (Burke, et al, 1982) and consists of more than 700 feet of conglomerate and arkosic sand, basalt, and volcanic tuff (Dibblee, 1968).

Overlying the Jackhammer Formation, with local angular unconformity, is the Pickhandle Formation. This rock unit was deposited in the early Miocene and consists of more than 3,000 feet of volcanic tuff, breccia, sandstone, siltstone, and granitic conglomerate, making it the thickest Tertiary unit within the Barstow basin (Dibblee, 1968).

Lying above the Pickhandle is the Barstow Formation. This unit is described as a sequence of deformed, stream-laid conglomerates, sandstones, lacustrine clays, and thin tuffs, which have a cumulative thickness of approximately 3,000 feet in the Mud Hills (Dibblee, 1968). The tuffs were initially deposited as volcanic ash, and subsequently altered to the zeolite mineral clinoptilolite. The Barstow Formation was deposited in the middle Miocene, and is recognized as containing one of the largest assemblages of fossil vertebrate fauna found in the Cenozoic rocks of North America (Dibblee, 1968).

Overlying the compressed and highly beveled surface of the Barstow basin is a relatively thin cover of late Pleistocene alluvial fan deposits (fanglomerates). These deposits cap the divides and are partially responsible for curtailing the erosion of the soft, underlying sediments.

Mining History

The principal mining activity in the planning area has occurred within the Mud Hills. The mining history of this area is somewhat enigmatic, as there are no records for many of the prospects. A small tonnage of strontianite was produced east of the subject area from 1917 to 1920 (Durrell, 1953) and from 1939 to 1941 (Ver Planck, 1957).Within Fossil Canyon are several small prospect pits and adits which may represent early strontianite excavations.

Prospecting permits were issued in the Mud Hills for potassium in 1920 and 1930, and for sodium in 1958 and 1960. There is no record of production for potassium or sodium saline minerals in the Mud Hills, and no leases were issued to the permittees.

In the 1940's and 1950's bentonite deposits were mined in the green and brown clays of the Barstow Basin. The intent was to use the bentonites as a drilling additive, however, they contained gypsum and other contaminants which reduced the viscosity, making the operation uneconomical (Collins, 1990).

Traces of an unidentified radioactive material were discovered in the Coon claims in Section 23?, T. 11N., R. 2W. (Dibblee, 1968). Some of the prospects discovered within the area may have been made in the 1950's for radioactive minerals.

In the southeast portion of the planning area, approximately 10,000 tons of zeolite (clinoptilolite) have been mined from an open pit in N 1/2 Section 28, T. 11 N., R. 1 W. Occidental Minerals sold 2,000 tons in late 1981 or early 1982 to a British firm which used it to clean up nuclear waste. The current owner, Steelhead Specialty Minerals, mines zeolites from this area on a "campaign basis", where excavated material is stockpiled in a one or two week period, for use throughout the year (Gulick, 1990, personal communication).

In the northern half of the planning area, a number of mining prospects, exploratory pits, and trenches dot the landscape, although no major production has been reported. These excavations are typically dry-wash type operations, where placer sand and gravel is processed to extract gold.

Paleontology

The scenic badlands topography of the planning area exposes one of the best known and most intensively studied late Miocene age fossil assemblages ever discovered in the United States. The fossil bearing sediments of Rainbow Basin and Mud Hills are of extreme scientific importance and of national significance, providing students and professionals in the earth sciences an important field study location for geological and paleontological research. In addition to its scientific importance, the planning area, or the "fossil beds" as it has come to be known locally, is a recreational area that has attracted the public-at-large for many years.

Paleontological research within the planning area began in the early 1900's when Dr. J.C. Merrium, University of California, Berkeley, identified the Rainbow Basin and the Mud Hills as a location of significant fossiliferous deposits. Dr. Merrium and subsequent vertebrate paleontologists conducting paleontological investigations within the study area have determined that the fossil bearing sediments within the Barstow Formation deposits contains an extensive fossil assemblage deposited in the late Miocene over a period of time that spanned approximately four million years of time (Woodburne and Tedford 1982:65-67). Specimens recovered from the planning area have provided

paleontologists with the necessary data to identify the fossils present as belonging to what has become known as the Barstovian Land Mammal Age of North America (cf. Salvage and Russel 1983). This paleontological research represents the cornerstone for dating and interpreting Miocene deposits throughout the continental United States. The fieldwork and research initiated by Dr. Merrium in 1911 has continued through time by a number of paleontological researchers and academic institutions to the present day (e.g., Steinen, 1966; Lindsay, 1972; Salvage and Russell, 1983; Woodburne and Tedford, 1982; Woodburne, Tedford, and Swisher, 1990; MacFadden et al, 1990, etc.).

The fossil bearing sediments of the planning area belong to the late Miocene age of the Cenozoic era, or the age of mammals. Over the years these prolific deposits have yielded at least 17 new species of mammals. Some of the more exotic fossil specimens that characterizes the late Miocene fossils recovered from the Rainbow Basin and the Mud Hills includes genera and several species of the camel and three-toed horse, bear-dog, sabre-toothed cats, mastodons, pygmy rhinoceros, condors, flamingos, as well as true cats, dogs, tortoise, deer, antelope, peccaries, and a variety of rodents and bird species. In 1941, the Rainbow Basin area was designated by the North American Paleontological Society as the type locality or reference standard for the Barstovian Land Mammal age. The area is the cornerstone for dating and interpreting Miocene continental deposit throughout the nation (MacFadden et al., 1990:478). The potential for further discoveries of new, or unknown Miocene-aged animal species remains possible as paleontological fieldwork and research continues.

At present over 368 paleontological sites have been identified and recorded within the planning area. Many of these dispersed and fragile fossil deposits have experienced both surface and subsurface damage as a result of natural causes, mining activities, vandalism (both purposeful destruction and destruction caused by fossil collection by amateur collectors), rock hounding activities, off-highway vehicle use, and other recreational activities. Nonetheless, the paleontological resources present within the planning area represents an extremely important resource with the potential to contribute invaluable paleontological data to the scientific community. Managed properly, The Rainbow Basin and Mud Hills, can also continue to provide the general public with an area conducive to public interpretation, recreation opportunities, and natural resource conservation.

Soils

The soils within the Rainbow Basin area are predominately heavy clays composed of uplifted and exposed sedimentary layers that

have been eroded and sculpted by wind and water creating a badlands appearance. The soils sustain little vegetation.

In the extreme southern end of the planning area and in scattered pockets within the badlands, soils have developed from alluvium. Soils on gently sloping alluvium are deep, moderately slowly permeable, light brown sandy loams of the Adelanto-Mohave Association. The erosion on these gently sloping areas is slight.

Aeolian sands occupy some of the ridgelines in the northern portion of the planning area.

Climate and Air Quality

Climate in the region is arid with an average annual precipitation of roughly 5 inches. Most of the precipitation is in the form of rain and occurs primarily from December through March. Occasional flash floods occur from summer thunderstorms. Strong westerly winds are common throughout the spring. The mean annual wind speed in the region is 7-8 miles per hour. Temperatures range from 20 to 110 degrees Fahrenheit. Air quality in the area is good, although small amounts of smog drift into the area from the Los Angeles and San Joaquin Basins.

Vegetation

Vegetation in the planning area is a blend of Joshua tree (Yucca brevifolia) woodland and creosotebush (Larrea tridentata) scrub community with associated species of burrobush (Ambrosia dumosa), ratany (Krameria spp.), and cheesebush (Hymenoclea salsola). Many portions of the planning area are devoid of vegetation due to substrates not conducive to plant growth.

The plant Psorothamnus arborescens var. arborescens (formerly known as Dalea arborescens), is known to occur in the planning area. Its federal status is "too widespread and/or not threatened." This species, endemic to California, is considered by the California Native Plant Society as rare, but in sufficient numbers that potential for extinction is low at this time and not endangered.

There are no known federal or state listed endangered, threatened or BLM sensitive plant species within the planning area.

Range Management

The Rainbow Basin ACEC is within the Superior Valley Allotment. The Superior Valley Allotment is a sheep allotment which is utilized during the spring. BLM records indicate that the

allotment was authorized in 1958 and is currently leased to Bidart Brothers of Bakersfield, California.

The ewes with lambs are brought to the desert in the spring when the succulent ephemeral forage is growing. The lambs are finished on the desert and are shipped to market during the month of May. The ewes remain on the desert until the end of May to the first of June.

The Superior Valley Allotment was categorized as a "Maintain" allotment with ephemeral use during the 1980 CDCA Plan. The allotment is scheduled to have a Allotment Management Plan written within the next 3-5 years.

Visual Resources

The Rainbow Basin area features spectacular folded, faulted and eroded geologic strata. Visitors can explore narrow winding ravines between towering walls, and may see remains of ancient mammals exposed in the multicolored rock layers.

The CDCA Plan lists Rainbow Basin/Owl Canyon as ACEC Number 39, identifying "outstanding scenic quality" as the initial resource value. Of the other 77 ACECs in the California Desert Conservation Area, that level of scenic quality is listed as the initial value only for Trona Pinnacles and Mopah Spring.

FLPMA[1], NEPA[2], AND SMCRA[3] provide policy direction for reducing the impact of development activities on scenic values. BLM has responded by integrating "Visual Resources Management" (VRM) into environmental assessment, project planning and design.[4]

VRM information is available as guidance for BLM field managers when deciding the amount of visual change acceptable.[5] VRM may also be employed when evaluating relationships between scenic quality and management action.

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[1] Federal Land Policy and Management Act of 1976, P.L. 94-579, 43 U.S.C. 1701 et. seq., Sections 102(a)(8), 103(c), 201(a) and 505(a).

[2] National Environmental Policy Act of 1969, P.L. 43 U.S.C. 4321 et. seq., Sections 101(b) and 102.

[3] Surface Mining Control and Reclamation Act of 1977, 30 U.S.C. 1201 et. seq., Section 102(d).

[4] See BLM Manual, Section 8400

[5] BLM Manual, Section 8400.07B

As determined by current VRM classifications, most of the Planning Area acreage is within Class II boundaries, with a lesser acreage considered Class III.

Class II provides that visual changes caused by management activity should not be evident in the characteristic landscape. Contrasts, while visible, must not attract attention.

Class III allows contrasts caused by management activity to be evident if they remain subordinate to the existing landscape.

Cultural Resources

Available archaeological data suggest that the Rainbow Basin and the Mud Hills were never intensively occupied by any of the prehistoric cultures of the western Mojave Desert. This lack of intensive occupation, utilization and/or exploitation of the natural resources of the area is probably due either to the lack of a permanent, dependable water supply, or the proximity of preferable habitation site locations to the south of the planning area. However, archaeological data specific to this portion of the Mojave Desert is very limited as no formal cultural resource inventories have been conducted within the Rainbow Basin and Mud Hills area. At present a total of fourteen archaeological sites have been recorded within the boundaries of planning area. Of this total three represent temporary habitation sites, three are flake scatters, one is a petroglyph, or rock art site, and eight are recorded as isolated lithic sites (one or two stone flakes artifacts comprise the entire site). The limited historic resources of the planning area include exploration mining locales, and temporary campsite locations used by early paleontological expeditions that date to the early 1900s.

The planning area, situated north of the Mojave River, is within the boundary of the Serrano Indians traditional resource area. Other cultural groups that may have potentially exploited the natural resources and/or traveled through the area includes the Mojave, Chemehuevi, Kitanemuk and Panamint-Shoshone Indians. Artifactual materials recovered from one of the temporary campsites excavated in the early 1980s were diverse and relatively extensive, reflecting a wide range of subsistence, social and economic activities.

In summary, the planning area may be characterized as having a low to moderate level of cultural resources present, with the potential for unrecorded cultural resources to be found primarily along the ridges and terraces overlooking ephemeral drainages. The area is of scientific importance since it may potentially reveal important information about prehistoric resource exploitation and utilization strategies, and other social, political, and economic themes for the cultural groups that lived in the area in the distant past. Because the cultural resources

present are primarily surface manifestations of prehistoric cultural activities, surface disturbance activities, such as off-road vehicle use and rockhounding activities, present a serious threat to the cultural resources present.

Recreation and Education

The Rainbow Basin area receives approximately 20,000 public visits per year for recreational and educational activities. Principal recreation uses include nature study, sightseeing, photography, camping, rockhounding, shooting and hunting, horseback riding, and off-highway vehicle use.

Recreational developments include the Owl Canyon Campground and the Rainbow Basin Scenic Drive. The Owl Canyon Campground contains three vault toilets and 31 campsites, each with a parking pad, a picnic table, and grill. Some sites have shade ramadas. Potable water is available from a 1500 gallon underground tank and hand pump near the campground entrance and trash cans are located around the access road. The fee for camping is $4.00 per site per night and day use of the area for picnicking is free. An undeveloped group camping area is located southeast of the developed campground. It is used primarily by equestrian and student groups. The scenic drive is a 4-mile long road which takes visitors through the heart of the Rainbow Basin area with views of colorful geologic features.

The northern and eastern portions of the planning area have been heavily used by off-highway vehicles (OHV). Over the years, numerous routes have proliferated and some areas have been totally denuded of vegetation and soil structure has been completely destroyed. This type of OHV play is inappropriate to this area and will be stopped.

Recreation use is heaviest in the spring and fall. The extreme temperatures during the summer is a limiting factor on the number of people recreating in this area.

Educational use of the area by colleges and universities is quite extensive. Most of the current use is by classes studying paleontology or geology, but occasional wildlife or botany classes visit the area. The BLM conducts an outdoor classroom in the Owl Canyon Campground in the spring and fall for 5th grade students in the Barstow Unified School District. Classes are taught in botany, wildlife, geology, desert survival, OHV safety, and archaeology/paleontology.

Vehicle Access

Route designation has not been completed for the area, however some routes have been designated as closed to protect important scenic and paleontological resources. The remaining motorized

vehicle access network will be designated as a part of the Rainbow Basin Natural Area Plan in accordance with the guidelines found in the California Desert Conservation Area Plan of 1980, as amended. Vehicle Route Designation Records of Decision are found in Appendix C.

Shooting

A notice in the Federal Register (Volume 51, Number 20, Thursday, January 30, 1986) closed seven sections to shooting. These were T.11N.,R.1W.,(SBM) Sections 18, 19, 20, 30, T.11N., R.2W., (SBM) Sections 23, 24, 26. These restrictions do not prohibit legitimate hunting activities, only target shooting, trap shooting, and plinking. The remainder of the planning area is presently open to all types of shooting and hunting.

Other Critical Resources

In addition to the resources discussed here, the following critical items have been determined to be absent from the Rainbow Basin area or would not impact or be impacted by the proposed action or alternatives:

a. Air Quality
b. Prime or Unique Farmlands
c. Floodplains
d. Native American Religious Concerns
e. Solid and Hazardous Waste Concerns
f. Drinking and Groundwater Quality
g. Wetlands and Riparian Zones
h. Wild and Scenic Rivers
i. Wilderness and Wilderness Study Areas

IV. Environmental Consequences

Proposed Action

Impacts to soil, vegetation, wildlife, scenic, and cultural resources would all be positive with the elimination of off-highway vehicle (OHV) play in the overall area and expanded restrictions on shooting, including hunting. There would be some minimal site specific disturbances associated with installing signs, barricades, etc. There would be no impact to mineral resources.

By designating an access network which allows for recreational and commercial uses of the Rainbow Basin area and closing all other routes and areas used for OHV play to vehicle access, the damage to soil, vegetation, wildlife, scenic, and cultural resources would be reduced substantially. Approved routes of travel (those designated as "open") would be signed as open

routes and all routes not signed as open are closed to use by motorized vehicles. Direction for designating routes in general and for controlling vehicle use in Rainbow Basin specifically is found in the CDCA Plan.

Expanding the existing shooting restrictions and closing the area to hunting reduces the risk to visitors to this recreation area. The area is heavily used during the non-summer months for both educational and recreational activities. Little hunting activity takes place in this area at the present (approximately 170 hunting visits in 1989).

Displaced vehicle use and hunters would be insignificant. The access network surrounding the Rainbow Basin area would allow many opportunities for accessing the desert for traditional recreation uses. The access network within the area is adequate to meet the needs of recreation and commercial users. OHV play is inappropriate and illegal in the Rainbow Basin area and those interested in this type of recreation activity can easily be accommodated in one of the CDCA's off-highway vehicle areas. Small game is not abundant in the Rainbow Basin area because there are no natural or developed wildlife sources. Shooters and hunters would still have hundreds of thousands of acres of public land surrounding the area to practice their sport.

No Action Alternative

Under the no action alternative, routes would still be designated and the access network would be established under the guidance given in the CDCA Plan of 1980, as amended. OHV play would be directed to off-highway vehicle areas and eliminated from the Rainbow Basin area.

Shooting restrictions would remain on the seven sections of public land to which they now apply and there would be no restrictions on legal hunting. Use conflicts would continue between shooters and hunters.

Cumulative Impacts

Proposed Action

The impact of years of vehicle use in the area, especially OHV play, have left portions of the area heavily scarred. Closure of routes not needed for legitimate vehicle access and elimination of OHV play, followed by rehabilitation of the damaged areas would over time return these damaged areas to a natural condition. Approximately 41 miles of routes would remain open as part of the motorized vehicle access network, while 31 miles of routes are or would be closed to protect sensitive resource values. Soils, vegetation, wildlife, and scenic resources would

be enhanced by the planned actions, therefore the cumulative impacts of this plan in the present and future would be positive.

No Action Alternative

OHV play would be restricted and routes would be designated through the route designation process identified in the CDCA Plan. Vehicle impacts would be controlled and reversed much the same as for the proposed action. Shooting and hunting would continue on all but the current seven sections of land currently closed to shooting. This would continue an unsafe action in a recreation area where people are being concentrated for low impact recreation activities.

V. Monitoring

Monitoring is described in section IV of the management plan on page 13.

VI. List of Preparers

Mike Dekeyrel	Realty Specialist Bureau of Land Management
Michael Ford	Geologist Bureau of Land Management
David Frink	Wilderness Specialist (VRM) Bureau of Land Management
Dean Huibregtse	Range Conservationist Bureau of Land Management
Harold Johnson	Outdoor Recreation Planner Bureau of Land Management
Paul McClain	Wildlife Biologist Bureau of Land Management
John Murray	Archeologist Bureau of Land Management
Sharon Paris	Environmental Coordinator Bureau of Land Management
Ed Ruth	Sector Ranger Bureau of Land Management

VII. Consultation and Coordination

California Association of 4-Wheel Drive Clubs

California Department of Fish and Game

Desert Studies Consortium

Equestrian Trails, Inc.

Los Angeles County Natural History Museum

National Park Service

San Bernardino County Museum

San Bernardino County Planning Department

Sierra Club

U.S. Fish and Wildlife Service

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APPENDIX B: VEHICLE ROUTE DESIGNATION RECORDS OF DECISION

The first three records of decision contain routes that were designated closed in 1987. The other records of decision contain routes that are being designated as open or closed through this management plan.

CALIFORNIA DESERT DISTRICT
VEHICLE ROUTE DESIGNATION RECORD OF DECISION

1. LAND CLASS (C) (L) (M) (I) (U) (WSA) (ACEC)
2. ORV AREA DESIGNATION: (OPEN) (CLOSED) (LIMITED) (UNDESIGNATED)
3. ROUTE NUMBER(S):

Patrol	Sector	Location	Code		Number		
	C	1	1		1	2	12
	C	1	1		1	4	10
	C	1	1		1	5	13
	C	1	1		1	6	11

4. RESOURCE AREA: (R) (B) (N) (I) (E)
5. TOPOGRAPHIC BASE MAP(S): Opal Mountain (7.5') or (15')
   _____ (7.5') or (15')
6. DESIGNATION CRITERIA - 43 CFR 8342.1

(a) Areas and trails shall be located to minimize damage to soil, watershed, vegetation, air, or other resources of the public lands, and to prevent impairment of wilderness suitability.

(b) Areas and trails shall be located to minimize harassment of wildlife or significant disruption of wildlife habitats. Special attention will be given to protect endangered or threatened species and their habitats.

(c) Areas and trails shall be located to minimize conflicts between off-road vehicle use and other existing or proposed recreational uses of the same or neighboring public lands, and to ensure the compatibility of such uses with existing conditions in populated areas, taking into account noise and other factors.

(d) Areas and trails shall not be located in officially designated wilderness areas or primitive areas. Areas and trails shall be located in natural areas only if the authorized officer determines that off-road vehicle use in such locations will not adversely affect their natural, aesthetic, scenic, or other values for which such areas are established.

7. RECOMMENDATION - PROPOSED DESIGNATION: (OPEN) (LIMITED) (CLOSED)
   IF LIMITED EXPLAIN: _____
8. BASED ON 8342.1 CRITERIA (CRITERION) (a) (b) (c) (d)
9. ROUTE SPECIFIC RATIONALE: Closed to minimize damage to visual, soil, and cultural resources; to minimize harassment of wildlife; to minimize conflicts with other recreation users; and to minimize impacts to aesthetic, scenic, and natural values in the Rainbow Basin Natural Area and ACEC.

(continue on reverse)

10. RECOMMENDED BY: Christopher J. Rush — 5/22/85 Date
    Verle E. Wenneker II — 5/23/85 Date
    James E. Chase — 5/29/85 Date
11. DECISION: APPROVED BY: Alden Sievers — 17 June 87 Date
    Area Manager

CALIFORNIA DESERT DISTRICT
VEHICLE ROUTE DESIGNATION RECORD OF DECISION

1. LAND CLASS (C) ((L)) (M) (I) (U) (WSA) ((ACEC))
2. ORV AREA DESIGNATION: (OPEN) (CLOSED) ((LIMITED)) (UNDESIGNATED)
3. ROUTE NUMBER(S):

Patrol	Sector	Location Code		Number			
	C	1	0			4	2
	C	1	0			8	9
	C	1	0			9	5
	C	1	0		1	0	4
	C	1	0		1	6	7

4. RESOURCE AREA: (R) ((B)) (N) (I) (E)
5. TOPOGRAPHIC BASE MAP(S): Opal Mountain (7.5') or ((15'))
   _____ (7.5') or (15')
6. DESIGNATION CRITERIA - 43 CFR 8342.1

(a) Areas and trails shall be located to minimize damage to soil, watershed, vegetation, air, or other resources of the public lands, and to prevent impairment of wilderness suitability.

(b) Areas and trails shall be located to minimize harassment of wildlife or significant disruption of wildlife habitats. Special attention will be given to protect endangered or threatened species and their habitats.

(c) Areas and trails shall be located to minimize conflicts between off-road vehicle use and other existing or proposed recreational uses of the same or neighboring public lands, and to ensure the compatibility of such uses with existing conditions in populated areas, taking into account noise and other factors.

(d) Areas and trails shall not be located in officially designated wilderness areas or primitive areas. Areas and trails shall be located in natural areas only if the authorized officer determines that off-road vehicle use in such locations will not adversely affect their natural, esthetic, scenic, or other values for which such areas are established.

7. RECOMMENDATION - PROPOSED DESIGNATION: (OPEN) (LIMITED) ((CLOSED))

   IF LIMITED EXPLAIN: _____

8. BASED ON 8342.1 CRITERIA (CRITERION) ((a)) ((b)) ((c)) ((d))
9. ROUTE SPECIFIC RATIONALE: Closed to minimize damage to paleontological, wildlife, scenic and natural area values and to minimize conflicts between ORV use and other recreation uses (hiking and nature study) within the Rainbow Basin Natural Area and ACEC.

(continue on reverse)

10. RECOMMENDED BY: Christopher J. Rush — 5/22/85 (Date)
    Verle E. Wenneker II — 5/23/85 (Date)
    James E. Chase — 5/29/85 (Date)
11. DECISION: APPROVED BY: Alden Sievers, Area Manager — 17 June 87 (Date)

CALIFORNIA DESERT DISTRICT
VEHICLE ROUTE DESIGNATION RECORD OF DECISION

1. LAND CLASS (C) ((L)) (M) (I) (U) (WSA) ((ACEC))
2. ORV AREA DESIGNATION: (OPEN) (CLOSED) ((LIMITED)) (UNDESIGNATED)
3. ROUTE NUMBER(S):

Patrol	Sector	Location Code		Number		
	C	1	0	1	7	6
	C	1	0	1	8	8
	C	1	0	1	9	1
	C	1	0	2	1	3

4. RESOURCE AREA: (R) ((B)) (N) (I) (E)

5. TOPOGRAPHIC BASE MAP(S): Opal Mountain (7.5') or ((15'))
_____ (7.5') or (15')

6. DESIGNATION CRITERIA - 43 CFR 8342.1

(a) Areas and trails shall be located to minimize damage to soil, watershed, vegetation, air, or other resources of the public lands, and to prevent impairment of wilderness suitability.

(b) Areas and trails shall be located to minimize harassment of wildlife or significant disruption of wildlife habitats. Special attention will be given to protect endangered or threatened species and their habitats.

(c) Areas and trails shall be located to minimize conflicts between off-road vehicle use and other existing or proposed recreational uses of the same or neighboring public lands, and to ensure the compatibility of such uses with existing conditions in populated areas, taking into account noise and other factors.

(d) Areas and trails shall not be located in officially designated wilderness areas or primitive areas. Areas and trails shall be located in natural areas only if the authorized officer determines that off-road vehicle use in such locations will not adversely affect their natural, aesthetic, scenic, or other values for which such areas are established.

7. RECOMMENDATION - PROPOSED DESIGNATION: (OPEN) (LIMITED) ((CLOSED))

IF LIMITED EXPLAIN: _____

8. BASED ON 8342.1 CRITERIA (CRITERION) ((a)) ((b)) ((c)) ((d))

9. ROUTE SPECIFIC RATIONALE: Closed to minimize damage to paleontological, wildlife, scenic and natural area values and to minimize conflicts between ORV use and other recreation uses (hiking and nature study) within the Rainbow Basin Natural Area and ACEC.

(continue on reverse)

10. RECOMMENDED BY: Christopher J. Rush — 5/22/85 Date
Verle E. Wenneker II — 5/22/85 Date
James E. Chase — 5/29/85 Date

11. DECISION: APPROVED BY: Alden Sievers, Area Manager — 17 June 87 Date

CALIFORNIA DESERT DISTRICT
VEHICLE ROUTE DESIGNATION RECORD OF DECISION

1. LAND CLASS (C) (L) (M) (I) (U) (WSA) (ACEC)
2. ORV AREA DESIGNATION: (OPEN) (CLOSED) (LIMITED) (UNDESIGNATED)
3. ROUTE NUMBER(S): E F 4 0 0 1
   Patrol Sector Location Code Number

4. RESOURCE AREA: (R) (B) (N) (I) (E)

5. TOPOGRAPHIC BASE MAP(S): OPAL MOUNTAIN (7.5') or (15')
   BARSTOW (7.5') or (15')

6. DESIGNATION CRITERIA - 43 CFR 8342.1

(a) Areas and trails shall be located to minimize damage to soil, watershed, vegetation, air, or other resources of the public lands, and to prevent impairment of wilderness suitability.

(b) Areas and trails shall be located to minimize harassment of wildlife or significant disruption of wildlife habitats. Special attention will be given to protect endangered or threatened species and their habitats.

(c) Areas and trails shall be located to minimize conflicts between off-road vehicle use and other existing or proposed recreational uses of the same or neighboring public lands, and to ensure the compatibility of such uses with existing conditions in populated areas, taking into account noise and other factors.

(d) Areas and trails shall not be located in officially designated wilderness areas or primitive areas. Areas and trails shall be located in natural areas only if the authorized officer determines that off-road vehicle use in such locations will not adversely affect their natural, aesthetic, scenic, or other values for which such areas are established.

7. RECOMMENDATION - PROPOSED DESIGNATION: (OPEN) (LIMITED) (CLOSED)

   IF LIMITED EXPLAIN: _____

8. BASED ON 8342.1 CRITERIA (CRITERION) (a) (b) (c) (d)

9. ROUTE SPECIFIC RATIONALE: THIS ROUTE FOLLOWS AN AT&T CABLE LINE. FROM ITS INTERSECTION WITH FOSSIL BED ROAD WESTWARD, IT IS THE PRIMARY ROUTE BISECTING THIS AREA.

(continue on reverse)

10. RECOMMENDED BY: Harold Johnson 5/1/90
    Date

    _____ _____
    Date

    _____ _____
    Date

11. DECISION: APPROVED BY: _____ _____
    Area Manager Date

CALIFORNIA DESERT DISTRICT
VEHICLE ROUTE DESIGNATION RECORD OF DECISION

1. LAND CLASS (C) (L) (M) (I) (U) (WSA) (ACEC)
2. ORV AREA DESIGNATION: (OPEN) (CLOSED) (LIMITED) (UNDESIGNATED)
3. ROUTE NUMBER(S):

Patrol Sector	Location Code	Number
C	03	003
C	10	014
C	10	012
C	10	002
C	10	003
C	10	005

4. RESOURCE AREA: (R) (B) (N) (I) (E)
5. TOPOGRAPHIC BASE MAP(S): OPAL MOUNTAIN (7.5') or (15')
   BARSTOW (7.5') or (15')
6. DESIGNATION CRITERIA - 43 CFR 8342.1

(a) Areas and trails shall be located to minimize damage to soil, watershed, vegetation, air, or other resources of the public lands, and to prevent impairment of wilderness suitability.

(b) Areas and trails shall be located to minimize harassment of wildlife or significant disruption of wildlife habitats. Special attention will be given to protect endangered or threatened species and their habitats.

(c) Areas and trails shall be located to minimize conflicts between off-road vehicle use and other existing or proposed recreational uses of the same or neighboring public lands, and to ensure the compatibility of such uses with existing conditions in populated areas, taking into account noise and other factors.

(d) Areas and trails shall not be located in officially designated wilderness areas or primitive areas. Areas and trails shall be located in natural areas only if the authorized officer determines that off-road vehicle use in such locations will not adversely affect their natural, aesthetic, scenic, or other values for which such areas are established.

7. RECOMMENDATION - PROPOSED DESIGNATION: (OPEN) (LIMITED) (CLOSED)
   IF LIMITED EXPLAIN: _____
8. BASED ON 8342.1 CRITERIA (CRITERION) (a) (b) (c) (d)
9. ROUTE SPECIFIC RATIONALE: THE ROUTES PROVIDE PUBLIC ACCESS INTO THE SOUTHERN PART OF THE AREA. C 102 IS THE RAINBOW BASIN LOOP ROAD, C 103 IS THE OWL CANYON CAMPGROUND ROAD, C 105 ACCESSES THE SOUTH RIM BELOW COON CANYON, C 1012 AND C 1014 ACCESS FOSSIL CANYON, AND C 033 IS THE WESTERN END OF FOSSIL BED ROAD AND TIES INTO ROUTES IN THE HINKLEY AREA.
   (continue on reverse)
10. RECOMMENDED BY: Harold Johnson — 5/1/90 Date
    _____ Date
    _____ Date
11. DECISION: APPROVED BY: _____ Area Manager — _____ Date

CALIFORNIA DESERT DISTRICT
VEHICLE ROUTE DESIGNATION RECORD OF DECISION

1. LAND CLASS (C) (L) (M) (I) (U) (WSA) (ACEC)
2. ORV AREA DESIGNATION: (OPEN) (CLOSED) (LIMITED) (UNDESIGNATED)
3. ROUTE NUMBER(S):

Patrol	Sector	Location Code		Number		
	C	1	1	0	1	9
	C	1	1	0	0	1
	C	1	1	0	1	2
	C	1	1	0	2	1
	C	1	0	0	1	5
	C	0	9	0	0	6

4. RESOURCE AREA: (R) (B) (N) (I) (E)
5. TOPOGRAPHIC BASE MAP(S): OPAL MOUNTAIN (7.5') or (15')
   LANE MOUNTAIN (7.5') or (15')
6. DESIGNATION CRITERIA - 43 CFR 8342.1

(a) Areas and trails shall be located to minimize damage to soil, watershed, vegetation, air, or other resources of the public lands, and to prevent impairment of wilderness suitability.

(b) Areas and trails shall be located to minimize harassment of wildlife or significant disruption of wildlife habitats. Special attention will be given to protect endangered or threatened species and their habitats.

(c) Areas and trails shall be located to minimize conflicts between off-road vehicle use and other existing or proposed recreational uses of the same or neighboring public lands, and to ensure the compatibility of such uses with existing conditions in populated areas, taking into account noise and other factors.

(d) Areas and trails shall not be located in officially designated wilderness areas or primitive areas. Areas and trails shall be located in natural areas only if the authorized officer determines that off-road vehicle use in such locations will not adversely affect their natural, aesthetic, scenic, or other values for which such areas are established.

7. RECOMMENDATION - PROPOSED DESIGNATION: (OPEN) (LIMITED) (CLOSED)
   IF LIMITED EXPLAIN: _____
8. BASED ON 8342.1 CRITERIA (CRITERION) (a) (b) (c) (d)
9. ROUTE SPECIFIC RATIONALE: THESE ROUTES ALL PROVIDE PUBLIC ACCESS INTO THE NORTHERN PORTION OF THE AREA. WITH THE EXCEPTIONS OF C1015 AND C1112, THEY PROVIDE LOOP DRIVING OPPORTUNITIES AND NORTHERN ACCESS TO COON AND FOSSIL CANYONS. C 1112 PROVIDES NORTHERN HIKING ACCESS TO OWL CANYON AND C1015 PROVIDES ACCESS NORTH OF FOSSIL CANYON.

(continue on reverse)

10. RECOMMENDED BY: Harold Johnson — 5/1/90 (Date)
    _____ — _____ (Date)
    _____ — _____ (Date)
11. DECISION: APPROVED BY: _____ (Area Manager) — _____ (Date)

CALIFORNIA DESERT DISTRICT
VEHICLE ROUTE DESIGNATION RECORD OF DECISION

1. LAND CLASS (C) (L) (M) (I) (U) (WSA) (ACEC)
2. ORV AREA DESIGNATION: (OPEN) (CLOSED) (LIMITED) (UNDESIGNATED)
3. ROUTE NUMBER(S):

Patrol Sector	Location Code	Number
C	10	004
C	11	020
C	11	053
C	11	018

4. RESOURCE AREA: (R) (B) (N) (I) (E)
5. TOPOGRAPHIC BASE MAP(S): OPAL MOUNTAIN (7.5') or (15')
   LANE MOUNTAIN (7.5') or (15')
6. DESIGNATION CRITERIA - 43 CFR 8342.1

(a) Areas and trails shall be located to minimize damage to soil, watershed, vegetation, air, or other resources of the public lands, and to prevent impairment of wilderness suitability.

(b) Areas and trails shall be located to minimize harassment of wildlife or significant disruption of wildlife habitats. Special attention will be given to protect endangered or threatened species and their habitats.

(c) Areas and trails shall be located to minimize conflicts between off-road vehicle use and other existing or proposed recreational uses of the same or neighboring public lands, and to ensure the compatibility of such uses with existing conditions in populated areas, taking into account noise and other factors.

(d) Areas and trails shall not be located in officially designated wilderness areas or primitive areas. Areas and trails shall be located in natural areas only if the authorized officer determines that off-road vehicle use in such locations will not adversely affect their natural, aesthetic, scenic, or other values for which such areas are established.

7. RECOMMENDATION - PROPOSED DESIGNATION: (OPEN) (LIMITED) (CLOSED)
   IF LIMITED EXPLAIN: _____
8. BASED ON 8342.1 CRITERIA (CRITERION) (a) (b) (c) (d)
9. ROUTE SPECIFIC RATIONALE: C104 PROVIDES ACCESS TO THE COON CANYON TRAILHEAD AND FROM THE TRAILHEAD NORTH THIS ROUTE WAS CLOSED IN 1987. C1120 IS OPEN WEST OF ITS INTERSECTION WITH C111 AND CLOSED NORTH OF ITS INTERSECTION WITH C111 BECAUSE IT CLOSELY DUPLICATES C1119 AND IS IN DESERT TORTOISE HABITAT. C1153 IS OPEN BETWEEN C111 AND C1118 AND C1118 IS OPEN BETWEEN ITS INTERSECTION WITH C1153 AND COPPER CITY ROAD TO ALLOW LOOP DRIVING OPPORTUNITIES. (continue on reverse)
10. RECOMMENDED BY: Harold Johnson 5/1/90
    Date
    _____ Date
    _____ Date
11. DECISION: APPROVED BY: _____ Date
    Area Manager

CALIFORNIA DESERT DISTRICT
VEHICLE ROUTE DESIGNATION RECORD OF DECISION

1. LAND CLASS (C) (L) (M) (I) (U) (WSA) (ACEC)
2. ORV AREA DESIGNATION: (OPEN) (CLOSED) (LIMITED) (UNDESIGNATED)
3. ROUTE NUMBER(S):

Patrol	Sector	Location Code		Number		
	C	1	8	0	0	2
	C	1	1	0	0	9
	C	1	1	0	1	0
	C	1	1	0	1	3
	C	1	0	0	0	6
	C	1	1	0	1	1

4. RESOURCE AREA: (R) (B) (N) (I) (E)
5. TOPOGRAPHIC BASE MAP(S): OPAL MOUNTAIN (7.5') or (15')
   BARSTOW (7.5') or (15')
6. DESIGNATION CRITERIA - 43 CFR 8342.1

(a) Areas and trails shall be located to minimize damage to soil, watershed, vegetation, air, or other resources of the public lands, and to prevent impairment of wilderness suitability.

(b) Areas and trails shall be located to minimize harassment of wildlife or significant disruption of wildlife habitats. Special attention will be given to protect endangered or threatened species and their habitats.

(c) Areas and trails shall be located to minimize conflicts between off-road vehicle use and other existing or proposed recreational uses of the same or neighboring public lands, and to ensure the compatibility of such uses with existing conditions in populated areas, taking into account noise and other factors.

(d) Areas and trails shall not be located in officially designated wilderness areas or primitive areas. Areas and trails shall be located in natural areas only if the authorized officer determines that off-road vehicle use in such locations will not adversely affect their natural, aesthetic, scenic, or other values for which such areas are established.

7. RECOMMENDATION - PROPOSED DESIGNATION: (OPEN) (LIMITED) (CLOSED)
   IF LIMITED EXPLAIN: _____
8. BASED ON 8342.1 CRITERIA (CRITERION) (a) (b) (c) (d)
9. ROUTE SPECIFIC RATIONALE: ALL THESE ROUTES ARE DEADENDS AND/OR DUPLICATE OTHER ROUTES THAT PROVIDE THE SAME OR BETTER ACCESS OPPORTUNITIES. BECAUSE OF DESERT TORTOISE AND SENSITIVE NATURE OF THE RAINBOW BASIN AREA, THESE ROUTES ARE UNNECESSARY AND PROVIDE NO PUBLIC ACCESS NEEDS NOT PROVIDED ON OTHER ROUTES.

(continue on reverse)

10. RECOMMENDED BY: Harold Johnson — 5/1/90 Date
    _____ — _____ Date
    _____ — _____ Date
11. DECISION: APPROVED BY: _____ Area Manager — _____ Date

CALIFORNIA DESERT DISTRICT
VEHICLE ROUTE DESIGNATION RECORD OF DECISION

1. LAND CLASS (C) (L) (M) (I) (U) (WSA) (ACEC)
2. ORV AREA DESIGNATION: (OPEN) (CLOSED) (LIMITED) (UNDESIGNATED)
3. ROUTE NUMBER(S):

Patrol	Sector	Location Code	Number
	C	1 1	035
	C	1 1	036
	C	1 1	037
	C	1 1	038
	C	1 1	039
			040

4. RESOURCE AREA: (R) (B) (N) (I) (E) 0041590 0035902
5. TOPOGRAPHIC BASE MAP(S): LAKE MOUNTAIN (7.5') or (15')
_____ (7.5') or (15')
6. DESIGNATION CRITERIA - 43 CFR 8342.1

(a) Areas and trails shall be located to minimize damage to soil, watershed, vegetation, air, or other resources of the public lands, and to prevent impairment of wilderness suitability.

(b) Areas and trails shall be located to minimize harassment of wildlife or significant disruption of wildlife habitats. Special attention will be given to protect endangered or threatened species and their habitats.

(c) Areas and trails shall be located to minimize conflicts between off-road vehicle use and other existing or proposed recreational uses of the same or neighboring public lands, and to ensure the compatibility of such uses with existing conditions in populated areas, taking into account noise and other factors.

(d) Areas and trails shall not be located in officially designated wilderness areas or primitive areas. Areas and trails shall be located in natural areas only if the authorized officer determines that off-road vehicle use in such locations will not adversely affect their natural, aesthetic, scenic, or other values for which such areas are established.

7. RECOMMENDATION - PROPOSED DESIGNATION: (OPEN) (LIMITED) (CLOSED)
IF LIMITED EXPLAIN: _____
8. BASED ON 8342.1 CRITERIA (CRITERION) (a) (b) (c) (d)
9. ROUTE SPECIFIC RATIONALE: THESE ROUTES ARE CLOSED BECAUSE OF THEIR ASSOCIATION WITH ACTIVE MINING OPERATIONS, DESERT TORTOISE HABITAT, AND OHV PLAY ASSOCIATED WITH THEM. NUMEROUS HILLCLIMBS AND OTHER OHV PLAY ACTIVITIES HAVE SEVERELY SCARRED THE AREA AROUND THESE ROUTES. THIS ACTIVITY WITH BE RELOCATED TO AN OHV AREA AND REHABILITATION OF THE SCARRING COMPLETED.

(continue on reverse)

10. RECOMMENDED BY: Harold Johnson 5/1/30 Date
_____ Date
_____ Date
11. DECISION: APPROVED BY: _____ Area Manager _____ Date

CALIFORNIA DESERT DISTRICT
VEHICLE ROUTE DESIGNATION RECORD OF DECISION

1. LAND CLASS (C) (L) (M) (I) (U) (WSA) (ACEC)
2. ORV AREA DESIGNATION: (OPEN) (CLOSED) (LIMITED) (UNDESIGNATED)
3. ROUTE NUMBER(S):

Patrol	Sector	Location Code		Number		
	C	0	9	0	0	2
	C	0	9	0	1	6
	C	1	0	0	0	7
	C	1	0	0	1	2
	C	1	0	0	1	3

4. RESOURCE AREA: (R) (B) (N) (I) (E)
5. TOPOGRAPHIC BASE MAP(S): OPAL MOUNTAIN (7.5') or (15')
   _____ (7.5') or (15')
6. DESIGNATION CRITERIA - 43 CFR 8342.1

(a) Areas and trails shall be located to minimize damage to soil, watershed, vegetation, air, or other resources of the public lands, and to prevent impairment of wilderness suitability.

(b) Areas and trails shall be located to minimize harassment of wildlife or significant disruption of wildlife habitats. Special attention will be given to protect endangered or threatened species and their habitats.

(c) Areas and trails shall be located to minimize conflicts between off-road vehicle use and other existing or proposed recreational uses of the same or neighboring public lands, and to ensure the compatibility of such uses with existing conditions in populated areas, taking into account noise and other factors.

(d) Areas and trails shall not be located in officially designated wilderness areas or primitive areas. Areas and trails shall be located in natural areas only if the authorized officer determines that off-road vehicle use in such locations will not adversely affect their natural, aesthetic, scenic, or other values for which such areas are established.

7. RECOMMENDATION - PROPOSED DESIGNATION: (OPEN) (LIMITED) (CLOSED)
   IF LIMITED EXPLAIN: _____
8. BASED ON 8342.1 CRITERIA (CRITERION) (a) (b) (c) (d)
9. ROUTE SPECIFIC RATIONALE: THESE ROUTES ARE ALL IN OR NEAR THE MOUTH OF FOSSIL CANYON. ACCESS IS ADEQUATE ON ROUTES C1015, C1014, AND C1012. THE CLOSING OF THESE DUPLICATIVE ROUTES ALSO PROTECTS DESERT TORTOISE HABITAT.

(continue on reverse)

10. RECOMMENDED BY: Harold Johnson — 5/1/90 (Date)
    _____ — Date
    _____ — Date
11. DECISION: APPROVED BY: _____ (Area Manager) — Date

APPENDIX C: SIGN PLAN

The goal of this sign plan is to identify types and locations of signs to enhance visitor enjoyment, provide visitor safety, and protect sensitive resources. Whenever possible sign texts are included in this plan, however in some cases, such as text for interpretive panels, the text will be developed through project plans. Sign types fall into three broad categories. These are directional signs, informational signs, and interpretive signs. All signs, except traffic control signs, will contain the Bureau of Land Management logo in some form for public identification. Sign shapes, sizes, and letter sizes will all conform to the Manual of Uniform Traffic Control Devices (MUTCD) and BLM Manuals 9130 and 9131.

Directional Signs

These signs direct visitors to the area and to facilities or locations within the area. This category includes traffic control signs.

1) The two access points into the Rainbow Basin Natural Area ACEC will be signed as follows:

   The southern access at the intersection of the Fort Irwin Road and Fossil Bed Road will contain appropriate directional arrows and text "RAINBOW BASIN NATURAL AREA" and "OWL CANYON CAMPGROUND".

   The northern access at the intersection of route C111 with the Copper City (Barstow-Randsburg) Road will contain the appropriate directional arrow and text "RAINBOW BASIN NATURAL AREA".

2) Prior to the intersection of Fossil Bed Road and the Rainbow Basin Scenic Drive a sign with appropriate directional arrows and text "RAINBOW BASIN SCENIC DRIVE", "OWL CANYON CAMPGROUND", "COON CANYON TRAIL", and "FOSSIL CANYON TRAIL" will direct visitors to these facilities.

3) An area identification sign will be located 150 feet north of Fossil Bed Road on the Rainbow Basin Scenic Drive. The sign text will be "RAINBOW BASIN NATURAL AREA", "WELCOME", and "PLEASE HELP PROTECT THIS NATIONAL NATURAL LANDMARK".

4) When the Rainbow Basin Scenic Drive is designated as a Back Country Byway, standard signs identifying the byway will be installed.

5) A sign will be installed at the intersection of the Rainbow Basin Scenic Drive (C102) and the Owl Canyon Campground

entrance road (C103) with appropriate directional arrows and text "OWL CANYON CAMPGROUND" and "OWL CANYON HIKING TRAIL".

6) A "ONE WAY TRAFFIC" sign with directional arrow will be installed on the Rainbow Basin Scenic Drive at the Owl Canyon Campground Road indicating that scenic drive north of the campground road is a one-way loop.

7) A stop sign is located at the intersection of the one-way Rainbow Basin Scenic Drive exit and Fossil Bed Road.

8) A "ONE WAY DO NOT ENTER" sign will be maintained at the intersection of the one-way Rainbow Basin Scenic Drive exit and Fossil Bed Road.

9) A sign will be installed at the intersection of routes EF401 and C104 with an appropriate directional arrow and text "COON CANYON HIKING TRAIL".

10) A sign will be installed at the intersection of routes EF401 and C1012 with an appropriate directional arrow and text "FOSSIL CANYON HIKING TRAIL".

11) An entrance sign will be installed at each camping area with text "OWL CANYON CAMPGROUND" and "OWL CANYON GROUP CAMPING AREA".

12) The Owl Canyon Campground will be regulated with "15 MPH" speed limit signs.

Informational Signs

These signs are used to give visitors appropriate messages that help them safely and legally enjoy the area.

1) Signs will be installed throughout the area with text "LIMITED USE AREA - ALL VEHICLE USE LIMITED TO APPROVED ROUTES OF TRAVEL".

2) Signs will be installed on all primary and secondary entrances into the area with text "APPROVED ROUTES OF TRAVEL ARE SIGNED AS OPEN ROUTES".

3) All approved routes of travel will be signed "OPEN ROUTE" alternately with signs containing the route numbers which can be keyed to the Desert Access Guides.

4) The trailheads for the Owl, Coon, and Fossil Canyon hiking trails will be identified.

5) Signs will be installed at all primary and secondary access roads into the area with text "NO SHOOTING OF FIREARMS IN THIS AREA, INCLUDING HUNTING".

6) The Rainbow Basin area is within Desert Tortoise Habitat and signs will be installed throughout the area that relate to the protection of this threatened species.

7) The entrance of the Owl Canyon Campground and the group camping area will have information bulletin boards which will contain visitor information regarding recreation and education opportunities found in the area and area regulations.

8) Each of the 31 campsites in the Owl Canyon Campground will have numbered site markers 1-31.

Interpretive Signs

These signs are used to explain the natural history and scientific relationships of the Rainbow Basin area.

1) Two interpretive foot trails will be developed along the Rainbow Basin Scenic Drive. Following the completion of these trails, signs identifying their locations will be installed. It has not been determined if these self-guided trails will use interpretive signs at each stop or use numbers keyed to a brochure.

2) Signs will be installed along the Owl, Coon, and Fossil Canyon hiking trails interpreting the natural history of the area. These sites will be determined through the project plans for these trails and text will be determined following their identification.

Decision:

In conformance with the California Desert Conservation Area Plan (1980, as amended), Chapter 4, the Bureau of Land Management has prepared the Rainbow Basin Management Plan for that special management area. This plan conforms to the CDCA Plan and complies with the regulations at 43 CFR 1600.

The preparation of the plan was identified as needed in the CDCA Plan to protect sensitive resource values in the area. The subject plan accomplishes these ends. The environmental assessment prepared to analyze this action adequately addresses the impacts involved. Therefore, the proposed plan, which is also the proposed action in the environmental assessment, is adopted as the Bureau's decision.

Finding of No Significant Impact:

Based upon the analysis of the potential environmental impacts of the proposed action and alternatives, it has been determined that the proposed action would not result in significant impacts to the human environment. The preparation of an environmental impact statement is not required, pursuant to the regulations of the Council on Environmental Quality and Bureau of Land Management policy.

_____ _____

Area Manager Date

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